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Corporate Compliance Program

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www.daicel.com/en



properly managed forests.



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The Daicel Group CSR Report 2013

Corporate Objective

We contribute to a better quality of life by developing and manufacturing products that society needs and values.

Daicel Spirit

Integrity and Ceaseless Efforts Focus on Creation of New Value (*Monozukuri*) Respect for Individuality and Achievements

Outline of the Daicel Group

The Daicel Group includes Daicel Corporation, its 63 subsidiaries and 11 affiliated companies. The Company's primary business is the manufacture and sales of cellulosic derivatives, organic chemicals, plastics and films, pyrotechnic devices and other products. The business segments of Daicel Corporation, its subsidiaries and affiliated companies are shown below.

List of Products and Group Companies by Segment

| Cellulosic Derivatives | |
|----------------------------|---|
| Principal Products: | Cellulose acetate, acetate tow for cigarette filters and |
| Principal Group Companies: | Domestic: Daicel Corporation / Daicel FineChem Ltd. Overseas: Xi'an Huida Chemical Industries Co., Ltd. / |
| Organic Chemicals | |
| Principal Products: | Acetic acid and its derivatives, caprolactone derivative |
| Principal Group Companies: | Domestic: Daicel Corporation / Kyodo Sakusan Co., Overseas: Chiral Technologies, Inc. / Chiral Technologi Daicel Chiral Technologies (China) Co., Lto |
| Plastics and Films | |
| Principal Products: | POM, PBT resins, ABS resins, engineering plastic alloy |
| Principal Group Companies: | Domestic: Polyplastics Co., Ltd. / Daicel Polymer Ltd. DM Novafoam Ltd. |
| | Overseas: Shanghai Daicel Polymers, Ltd. / Topas Ad |
| Pyrotechnic Devices | |
| Principal Products: | Automobile airbag inflators, emergency-escape syste |
| Principal Group Companies: | Domestic: Daicel Corporation / Daicel Safety Systems |
| | Overseas: Daicel Safety Systems America, LLC / Daice Daicel Safety Systems (Jiangsu) Co., Ltd. / |
| Others | |
| Principal Products: | Membrane separation modules for water treatment, |
| Principal Group Companies: | Domestic: Daicel Corporation / Daicen Membrane-Sy Daicel Arai Chemical, Ltd. / Daicel Logistic |
| | Overseas: Daicel (China) Investment Co., Ltd. |

Sales and Ordinary Income





The Daicel Group's CSR Basic Philosophy, Conduct Policy and Code of Conduct



Daicel Corporation (as of March 31, 2013)

Incorporated:

Paid-in capital:

Number of shares issued:

September 8, 1919 ¥36,275,440,089 364,942,682

nd CMC

/ Ningbo Da-An Chemical Industries Co., Ltd.

es, epoxy compounds, photoresist materials for semiconductors and chiral columns Ltd. / Dainichi Chemical Corp.

gies Europe S.A.S. / Daicel Chiral Technologies (India) Private Ltd. /

d. / Daicel Nanning Food Ingredients Co., Ltd.

ys, plastic molded products, functional coating films . / Daicel Pack Systems, Ltd. / Daicel Value Coating Ltd. / Daicel-Evonik Ltd. /

vanced Polymers GmbH

Sales by Segment

ems for aircraft crew and gunpowder s Inc. / Japan Shotshell Ltd. rel Safety Systems (Thailand) Co., Ltd., Daicel Safety Systems Europe Sp. z o. o. / Special Devices, Inc.

, transportation & storage services ystems Ltd. / Daicel Aboshi Sangyo Co., Ltd. / Daicel Ohtake Sangyo Co., Ltd. / cs Service Co., Ltd.



Number of Employees by Segment

Major Applications of Daicel Group Products

19

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The Daicel Group's products include many basic materials. As such, the general public may come in contact with them without even noticing it. Here we introduce finished goods around you that are produced using Daicel Group products and materials.

Hospita

• : Cellulosic derivatives • : Pyrotechnic devices 🔵 : Others : Organic chemicals • : Plastics and films

Japan's No.1

Sales share (Daicel es • TAC (cellulose acetate for LCD optical films)

4 Polyester fibers

V Lithium-ion batteries

Acetic acid

CMC

World's No.1 **2** Cigarette filters Acetate tow, Cellulose acetate

Japan's No.1

(5) Cosmetics, shampoos and conditioners 🛑 1, 3-BG HEC, CELISH

8 Automotive paints Caprolactone and special epoxy resins



6 Pharmaceuticals Ketene derivatives, monochloroacetic acid, amines and pyridines • СМС

D

Printed circuit boards Epoxy compounds



(D) LED traffic lights LED encapsulants

POM, PBT, LCP and PPS

treatment

Reverse osmosis mem

branes and ultrafiltration membranes

Pharmaceutical development Chiral columns

LCP World's No.1, POM World's No.1 (B) Office equipment (Daicel estimat and electronic components

8

and telecommunication devices SAN, ABS and polyamide resins

netting

Agricultural materials Foamed polyethylene

pocket warmers Packaging films

B Packaging and films for snacks and

(Water filtration and wastewater





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Special Features



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|---|------|
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The Daicel Group CSR Report 2013

Daicel Corporation has published an annual Environmental and Safety Report since fiscal 2000 (year ended March 31, 2001). From fiscal 2007 (year ended March 31, 2008), the scope of reporting was expanded to include social activities, and the report title was changed accordingly to Environmental, Safety and Social Report. From fiscal 2010 (year ended March 31, 2011), emphasis was placed on enhancing the report's content and information relating to the Company's efforts to fulfill its corporate social responsibility. Accordingly, we adopted the title, The Daicel Group CSR Report, and have focused our attention on improving reader-friendliness and understandability while engaging in proactive disclosure.

This CSR Report 2013 is primarily a compilation of the Daicel Group's activities in the areas of business, environmental preservation and safety, social contribution, and human resource development during fiscal 2012 (year ended March 31, 2013).

Also, in order to ensure reliability, Daicel has submitted its reports to the Responsible Care Verification Center of the Japan Chemical Industry Association (JCIA) for third-party verification annually since 2004.

*CSR Reports of Polyplastics Co., Ltd.

Group company Polyplastics' CSR reports are provided on their website at:

http://www.polyplastics.com/en/company/csr/ index vm



Detailed information on the Responsible Care Initiative is provided on the Company's website at:



Topics covered on our website are as follows:

| Environmental Management Systems |
|--|
| Environmental Accounting/Environmental Liabilities |
| Environmental Preservation |
| Environmental Management to Prevent Air and Water Pollution |
| Reduction and Recycling of Industrial Waste |
| Environmental Impact Data |
| Chemical Substance Management |
| Emission and Transfer of PRTR substances |
| Other Chemical and Product Safety Initiatives |
| |

Interview with the President

Every facet of our business is grounded in the principles of "safety" and "quality." We are committed to solidifying these principles as the foundation of our business while contributing to society.

Misao Fudaba

President and CEO, Daicel Corporation

M. Fudaba

Business Overview

 \bigcirc

What kind of year has fiscal 2012 been for the Daicel Group? Please provide us with an overview of business throughout the fiscal year.

f A Just as in fiscal 2011, the period under review was an extremely difficult year. Under normal circumstances, we should have witnessed a modest recovery in fiscal 2012 on the back of reconstruction following such major natural disasters as the Great East Japan Earthquake and flooding in Thailand. In reality, however, markets were buffeted by the prolonged debt crisis in Europe, the prices of such raw material fuels as methanol and crude oil, which continued to hover at high levels, and the sharp surge in the value of the yen through to November as it appreciated beyond the level of ¥80 to the U.S. dollar. During autumn, a boycott against Japanese products emerged in China due mainly to the dispute over the Senkaku Islands. These and other factors had a major impact on operating conditions throughout the year.

By business, global demand for acetate tow for cigarette filters continues to increase steadily. As a result, we were able to achieve full operating capacity at our manufacturing facilities and record firm sales volume growth in our cellulosic derivatives business. Sales volumes of tricetyl cellulose (TAC) for LCD optical film use fell more than 10% compared with the previous fiscal year. In addition to the drop in demand for LCD TVs, this downturn reflected weak operating conditions in the personal computer market, which is showing signs of stagnation following a structural shift in demand from PCs to smartphones and tablet PCs.

Mirroring TAC trends, the organic chemicals business continues to



confront a harsh environment with general-purpose products, particularly in the automobile- and electronic materials-related fields, coming under increased pressure. Turning to movements in foreign currency exchange rates, the sharp rise in the value of the yen against the U.S. dollar and euro has severely impacted export costs. Taking into consideration intensifying competition with imported products and the drop in export activity from China to Europe, conditions in general remained extremely difficult.

In the plastics and films business, year-on-year results were firm in overall terms. The impact of the boycott on Japanese products in China, however, was particularly severe.

On a positive note, sales volumes of airbag inflators in the pyrotechnic devices business rose substantially on the back of rapid recovery in automobile production. Unfortunately earlier steps to optimize our production structure in line with the lower levels of demand recorded until the previous fiscal year forced us to undertake considerable expenditure to accommodate the sudden surge in supply. From a profit perspective, this cast a slight pall over the strong results in this business.

Medium-Term Plan

The Group's 3D-I medium-term business plan comes to end at the end of fiscal 2013. Can you provide us with details of progress over the three-year period from April 2011 to March 2014?

A Fiscal 2013 is both the final year of 3D-I and the year in which we put in place 3D-II, our new medium-term plan that covers the three-year

period from April 2014 to March 2017. While the basic features and numerical targets of 3D-I were formulated in 2010, one year prior to the start of the plan, our results for the fiscal year ended March 31, 2013, which came in at sales of ¥358,513 million, operating income of ¥26,196 million and net income of ¥15,372 million, show that we have yet to rebound to the performance levels reached when the plan was formulated. As previously mentioned, our operating environment has been riddled with a succession of unexpected twists and turns. At the same time, and looking at the current status of major electronics manufacturers, the industry is undergoing a massive structural change. Despite these external factors, management success is ultimately about results. Although every effort was made to put in place measures that were considered appropriate at the time, the reality remains that major discrepancies exist between our results and numerical targets. It is therefore imperative that management think long and hard not only on the quantitative aspects of the Group's performance, but also on the adequacy of its strategies and business direction. Reflecting on whether 3D-I was indeed the best plan, we must draw on past experiences to ensure that 3D-II genuinely positions the Group on the best path going forward.

Q3 To what degree are you seeing the seeds of new businesses emerge?

A Functional raw material products that have been brought to the market include LED Transparent Encapsulants and organic EL (OLED) Panel Sealants, compounds for camera lenses and visible light response-type titanium oxide photocatalysts. In addition, steps are in place to consider the commercial application of such products as touch panel films, ultra-dispersed diamonds, pre-mixture additives for orally disintegrating tablets and EQUOL (an anti-aging solution derived from soybeans). In this regard, we are seeing steady progress (please refer to the

diagram below). The scale of our activities, however, remains small and we still have a long way to go. As we move further down the track, I believe that the potential for M&A will come under discussion.



Q4 What progress was made in strengthening core businesses?

.....

A We are charged with the responsibility of ensuring the stable supply of acetate tow for cigarette filters and automobile airbag inflators, which continue to experience firm demand. In the case of acetate tow for cigarette filters, we have expanded facilities at our Ohtake Plant and increased capacity at our Aboshi Plant. In an effort to further strengthen our capabilities in this area, we also established a joint-venture company with Mitsubishi Rayon Co., Ltd. Turning to automobile airbag inflators, we substantially expanded production lines, acquired Special Devices, Inc. (a company that engages in the manufacture and sale of initiators), and took preparatory steps to commence operations (scheduled start: December 2013) at our base in South Korea.

In our synthetic resin activities, we acquired LCP Leuna Carboxylation Plant GmbH, a company that specializes in the

Conduct Policy

We, the Daicel Group, have established the following Conduct Policy in order to realize our Basic Philosophy. Every member of the Daicel Group shall fully understand and voluntarily consider this Conduct Policy and shall put it into practice in a tangible way through their daily activities.

- We shall not only comply with all laws and regulations but also act with high ethical standards and sound judgment.
- We shall contribute to the development of society as good corporate citizens.
 We shall offer safe, high-quality products and services that satisfy and gain the
- trust of our customers. 4. We shall contribute to the development of local communities by complying with international rules and each country's laws and regulations and by respecting local cultures and customs.
- 5. We shall willingly and justly disclose reliable corporate information.
- We shall conduct honest trade in accordance with the basic principles of fair and free competition.
- We shall work positively to conserve the natural environment and to ensure safety.
 We shall properly manage corporate assets and information.
- We shall respect the diversity, personality and individuality of every member of the Daicel Group and shall maintain a healthy and comfortable work environment that
- is free from discrimination and harassment.
- The Daicel Group Conduct Policy: www.daicel.com/en/profile/policy.html

The Daicel Code of Conduct: www.daicel.com/en/profile/standard.html

Basic Purchasing Policy

The Raw Material Purchasing Center in charge of the purchase of raw materials and the Engineering Center Procurement Group responsible for the purchase of machinery have worked together to formulate the Basic Purchasing Policy. This Basic Purchasing Policy helps the suppliers who provide us with raw materials, equipment and services in the supply chain to better understand Daicel's approach to purchasing, while encouraging them to cooperate with us in fulfilling our CSR throughout our supply chain.

Basic Purchasing Policy

In keeping with courses of action intended to implement the Daicel Group's basic philosophy, we shall comply with the following Basic Purchasing Policy when purchasing from suppliers.

Fair & Rational Transactions

- We provide fair participation opportunities for transactions.
 Our overall considerations are matters of quality, price, stability of supply, technological development capability, environmental
- Our overall considerations are infacted or quality, price, stability of supply, technological development capability, environmental consideration and efforts to ensure safety. We consider these aspects in a comprehensive manner based on their economic rationality.
 We conduct our purchasing activities in an open manner with no regard for previous dealings or for whether the provider is located
- inside or outside Japan.
- Legal Compliance, Confidentiality and Information Disclosure
- Our business operations shall be based on legal compliance as well as corporate ethics.
- We strictly protect confidential information gained through businesses, and we never infringe third parties' intellectual property rights.

Establishing a Relationship of Trust • We strive to establish better partnerships with our suppliers by pursuing mutual economic benefit.

Initiatives based on CSR perspectives

We promote our CSR Initiatives with the aim of enhancing corporate value for both our suppliers and us



manufacture of p-hydroxybenzoate (p-HBA), a key monomer for liquid crystal polymers (LCPs). At the same time, we took steps to relocate activities to the long-fiber reinforced plastics manufacturing facility of Hirohata Plant and increase production.

Q5 What Grou

What activities were undertaken to bolster the Group's cost competitiveness?

A I believe that the proposal to establish a new polyacetal (POM) polymerization facility in Malaysia is an example of our efforts to optimize costs. By increasing capacity by 90,000 tons per year, our Group company Polyplastics Co., Ltd. will become the world's premier POM supplier with a structure that is capable of ensuring stable supply worldwide. Taking into consideration the global shift in production of chiral chromatographic columns by the pharmaceuticals industry from Europe and the United States to China and India, the Company is making similar moves.

Furthermore, in an effort to remain a half step ahead of the market, we are reconsidering cost reduction initiatives and targets that proved difficult to achieve under 3D-I. In reality, the daily efforts of each and every employee have gone a long way to securing cost reductions and energy savings. These endeavors have provided us with an appreciable extent of success under 3D-I. While this in itself is of considerable significance, the levels of improvement are limited. In order to continue manufacturing activities in Japan, it is vital that we adopt a process of innovation, which entails a drastic and thoroughgoing review of the production process. To this end, we are narrowing our focus on products that deliver expected effects, with each in-house Company, Production Technology Management, and R&D Management commencing projects.

Responsible Care and Corporate Ethics



The plants of the Daicel Group are concentrated in Western Japan. What measures are in place in the event of a Nankai Trough earthquake?

A There is little change to the countermeasures that I outlined last year. Based on the government's estimates regarding the risks of Nankai Trough earthquake, tsunami and liquefaction damage, we are taking all appropriate countermeasures. In specific terms, we took steps to promote an analysis of seismic conditions while undertaking structural reinforcement and seismic-resistance work throughout fiscal 2012. At the same time, energies were channeled toward verifying the risks associated with tsunami damage. Moreover, we introduced an emergency earthquake alert system and set up an employee's safety confirmation/emergency call system. Complementing these initiatives, we have adopted the use of satellite mobile communications and prepared a disaster response manual. Finally, we reviewed our evacuation plans in the event of a large-scale disaster and promoted other initiatives, including the promotion of a plan to stockpile essential items and supplies.

Q7 A number of incidents have occurred at chemical plants in recent years. What are your thoughts on this issue?

A Incidents at plants can be attributed to a number of factors. In general terms, these include the aging of facilities, inadequate training and deficiencies in the transfer of technological skills to the next generation and manpower shortages. In this regard, the Daicel Group is paying particular attention to implementing countermeasures that ensure the maintenance of its facilities and address facility aging and boost human resource development and training.

These measures alone, however, will not totally eliminate incidents. A variety of mechanisms and process of continual improvement are essential in ensuring safe and stable operations (please refer to pages 22-25). In addition, it is important to recognize that incidents will occur. In this context, immediate, timely and appropriate action holds the key to minimizing and overcoming trouble.

While the Daicel Production Innovation initiative has successfully reduced the incidence of trouble, the opportunities to experience difficulties have also declined. With this in mind, we renewed the Operation Training Center in March 2013. In addition to existing practical training in the operations of a small-scale plant, we have bolstered employee development by revamping crisis simulation training. These training programs are not limited to Daicel staff, but extend to the employees of Group companies.

Q8 What are your personal thoughts on safety?

.....

A In the past, the Company experienced the devastation of a major explosion at one of its plants. This naturally caused untold anxiety to local residents and municipalities. It is vital that we foster an unwavering culture of safety within our organization in order to prevent such an incident from ever occurring again. Putting in place and developing this culture is the mission and responsibility of management.





Management continues to emphasize the utmost importance in prioritizing safety on a periodic basis. On the 30th anniversary of the explosion at our former Sakai Plant in 2012, I took the opportunity to visit all employees at each workplace and again stress the importance of acting without hesitation in the event of trouble. Particular emphasis was placed on the need to report any and all incidents at the earliest possible opportunity and to carry out proper measures with confidence. On another note, I am directly involved in Companywide disaster response training, for the first time, I attended the emergency headquarters of one of our plants in February 2013. While training was conducted with a considerable sense of urgency, I believe that these sessions had particular significance as an opportunity to share with participants the reality that conditions during an actual disaster would represent a higher level of turmoil.

Q9 What measures were implemented during the fiscal year to promote corporate ethics?

f A Recognizing the importance of increasing each and every employees' awareness toward compliance and the Group's Corporate Ethics Initiatives, we established the Corporate Compliance Program in order to put in place a more robust structure and took steps to carry out a host of activities. In fiscal 2012, I had conferences with employees and directors at each workplace including our Tokyo head office and Osaka head office to directly convey my feelings toward the importance of maintaining the highest levels of corporate ethics (please refer to page 18).

The launch of our Corporate Compliance Program Division in part reflects the Group's past involvement in overseas legal action. At that time, litigation had a major impact on corporate management. With the passage of time, the sense of gravity dissipates and the number of employees who have no knowledge of past events increases. These conferences are therefore aimed to again bring corporate ethics to the fore. The Corporate Ethics Initiatives, and the Responsible Care Initiatives are twin pillars to Daicel group CSR activity therefore we will continue to emphasize these initiatives.

Human Resource Development

Q10 What activities are being undertaken in the area of technician training?

.....

f A As a part of the Group's overall technician training, KAIZEN case study meetings were held during fiscal 2012. These evolved from the automobile airbag inflators Global KAIZEN Contest. Prior to each meeting, I have made it a point to advise employees not to prepare solely for the sake of the meeting. In this regard, I also participated in preliminary meetings covering case studies that have not yet to be selected at several plants. I was stimulated by the unexpected nature of some themes and discussions with frontline staffs. This meaningful exchange was not just being done for the sake of the meeting.

The inflator Global KAIZEN Contest is another activity we hold. Difficulties in bringing staffs from all over the world forced a postponement in 2012. Staff at our China base, however, decided to hold their own meeting in lieu of the proposed meeting in Japan on the back of activities undertaken throughout the year. In participating in the event, I found that our China base had adopted a similar stance toward the significance of the meeting. In addition to announcing the top three ranked improvement case studies, I was encouraged by the emphasis placed on daily improvement activities.

What attributes is the Daicel Group seeking in its global human resources?

A Overseas sales account for around 40% of the Daicel Group's total net sales. While our ratio of production conducted overseas currently stands at just under 20%, we recognize the basic premise and need to engage in manufacturing in countries that offer low production costs. With this in mind, the ratios of overseas sales to total sales and overseas production to total production can be expected to rise. However, the advanced technologies and productivity that offset costs are properties of developed countries. Accordingly, it is important to adopt a balanced approach that encompasses both low-cost developing countries and developed countries.

Under these circumstances, the Daicel Group is in need of a diverse pool of human resources. The frequency of working with people, who come from a wide array of difficult cultures and backgrounds, is only likely to increase in the future. It is vital, therefore, that the Daicel Group seeks human resources who can excel on the world stage across all positions. Other important attributes include curiosity and a strong sense of responsibility. Entering the Daicel Group entails a mutual process of selection. Not only is the Company selecting an employee, but that employee is selecting the Company. The strength of this process is underpinned by the mutual commitment to work hard going forward.

In 2012, the Daicel Group initiated a meeting that drew together

executives from overseas affiliates with the presidents of Group companies in Japan. This inaugural meeting provided the forum to discuss a wide range of business topics including the features unique to each region. While meetings between the presidents of Group companies in Japan are conducted each year, this was the first to involve executives from overseas affiliates. Through communication and the use of this and similar opportunities, we are searching for personnel who are capable of running companies in each region.

In closing, do you have any message for stakeholders?

f A Carrying forward its longstanding philosophy that emphasizes a sustained passion for creativity, the Daicel Group pushed forward efforts to rebuild its organization and structure in 2010 under the Corporate

Fiscal 2012 Highlights

Apr. 2012

11th Daicel Group Responsible Care Promotion Assembly Held

Daicel held the 11th Daicel Group Responsible Care Promotion Assembly on April 3, 2012 at the Kinugake Club near the Company's Aboshi Plant.

The Company tries to raise employee awareness of the Responsible Care Initiative—one of the two pillars of its CSR Initiatives-with this annual event. In this year's assembly, Masamitsu Tamura, professor emeritus at the University of Tokyo, was invited to speak on "the concept of industrial safety, taking into consideration a safety culture."

Second KAIZEN Case Study Meeting Held

Daicel held its second KAIZEN Case Study Meeting at its Ohtake Plant on April 13, 2012. This meeting was attended by employees from six plants in Japan and the Central Research Center for a total of seven business bases. Teams selected from preliminary rounds at each business base were given the opportunity to present their individual case studies. The meeting served as a forum for sharing improvement activities undertaken on a daily basis and exchanging opinions. Moreover, in the lead-up to and immediately after the meeting, steps were taken to conduct plant tours and to provide the opportunity for presenters to interact. In this manner, the initiative as a whole was invaluable in promoting a strong sense of unity throughout the Group and promoting productive brainstorming.



Acquisition of an Equity Interest in an Initiator Manufacturing and Sales Company in the U.S. Completed

Through Daicel (U.S.A.), Inc., a subsidiary in the United States, Daicel completed the purchase of all of the issued and outstanding shares of Special Devices, Inc. (SDI), a U.S.-based company that engages in the manufacture and sale of initiators.

In acquiring an equity interest in the company, the Daicel Group has expanded its production capacity of initiators, a key ignition component used in the manufacture of automobile airbag inflators. By leveraging synergies with SDI, the Daicel Group will commence global sales of initiators, enhance production efficiency, promote the development of new products and expand global sales channels.



Daicel Polymer (Thailand) Co., Ltd. Established

Daicel Polymer Ltd. established Daicel Polymer (Thailand) Co., Ltd. in order to better market to mainly Japanese automobile-, electric equipment- and electronics-related customers, who continue to expand their business activities in Thailand, and to upgrade and expand its service capabilities.

Moving forward, the Group will make full use of the free trade agreements executed with Thailand and India and expand business in both countries by developing opportunities in the Indian automobile market, which continues to grow in similar fashion to Thailand.

Sep. 2012

Steps to Include a Manufacturer of Raw Materials for Liquid Crystal Polymers in the Scope of Consolidation as a Wholly Owned Subsidiary Completed Polyplastics Co., Ltd. acquired all of the issued and outstanding

Objective: "We contribute to a better quality of life by developing and manufacturing products that society needs and values." This philosophy is grounded in an unwavering commitment to safety and quality. In undertaking their everyday duties, management and employees recognize that even the slightest compromise in safety and quality will undo all their hard work and contribution. I am convinced that this philosophy and platform allows us to maintain our significance within society. Accordingly, this foundation remains resolute.

Based on this understanding, we have vigorously pushed forward in the belief that in doing the right thing we contribute to society and in doing the right thing we garner profits. This is the essence of the Daicel Spirit, which has held us in good stead for more than nine decades. A company is merely a collection of people. On this basis, success lies firmly in the hands of each and every employee.

In fiscal 2013, we will continue to hold dear the Daicel Spirit and engage in management with the aim of generating returns to all stakeholders.

shares of LCP Leuna Carboxylation Plant GmbH (LCPG), a Germany-based company that specializes in the manufacture of p-hydroxybenzoate (p-HBA), a key monomer for liquid crystal polymers (LCPs). LCPG was accordingly included in the scope of consolidation as a wholly owned subsidiary.

LCP is a super engineering plastic that is mainly applied to the key electronic parts of such IT devices as smart phones and tablet computers. Thanks to their booming popularity, an exponential increase in demand is expected.

Polyplastics Co., Ltd. is the leading manufacturer of LCP and has the largest production capacity in the world. The company is confident that this acquisition will help strengthen the technical advantage of its LCP business and will facilitate the stable supply of raw materials to customers

A Cogeneration Facility at the Aboshi Plant Comes On Line

A city-gas cogeneration facility was installed at the Daicel Group's Aboshi Plant, Commercial operations commenced on September 10. 2012. (Please refer to the TOPICS section on page 43 for details.)

Oct. 2012

Long Fiber-Reinforced Plastics Manufacturing Facility Relocated

Daicel Polymer Ltd. relocated its long fiber-reinforced plastics manufacturing facility from Daicel's Aboshi Plant to its Hirohata Plant on October 1, 2012.

Long fiber-reinforced plastics are enjoying growth especially as a metal substitute. This reflects the demand of increasingly light weight automobiles. The relocation of facilities has also been designed to facilitate an increase in future production capacity through integration with existing compound equipment. This initiative will also allow the Group to engage in comprehensive operations. In addition, steps will be taken to strengthen cooperation with the technical development center, which is responsible for the development of new grade products and production technologies.

Global Network

The Daicel Group has continued its global expansion since Daicel (U.S.A.), Inc. was established in 1984. The Group now endeavors to expand its global business through an overseas network that comprises 45 affiliates. For the fiscal year ended March 31, 2013, overseas sales totaled ¥151.8 billion, which represented a large percentage-42.0%-of total consolidated sales. Clearly, our international business operations are increasing in importance.

Principal International Affiliates of the Daicel Group

Germany

 Daicel (Europa) GmbH Purchase and sales of products in the European market Topas Advanced Polymers GmbH

Production, sales and research on cyclic olefin copolymer Polyplastics Europe GmbH Sales of engineering plastics products

Poland

Daicel Safety Systems Europe Sp. z o. o. Manufacture and sales of automobile airbag inflators

France

 Chiral Technologies Europe S.A.S. Sales of columns and provision of chromatographic enantioselective separation services on consignment

India

Olyplastics Marketing (India) Private Ltd. Sales of engineering plastic products **5** Daicel Chiral Technologies (India) Private Ltd. Sales of chiral columns and technical services for chiral husinesses

Singapore

O Daicel (Asia) Pte. Ltd. Purchase and sales of products in Asian markets Polyplastics Asia Pacific Singapore Pte. Ltd. Sales of engineering plastics

Malaysia

Polyplastics Asia Pacific Sdn. Bhd. Manufacture and sales of engineering plastics

Thailand

GmbH

3 Daicel Safety Systems (Thailand) Co., Ltd. Manufacture and sales of automobile airbag inflators Polyplastics Marketing (T) Ltd. Sales of engineering plastics Daicel Polymer (Thailand) Co., Ltd. Sales of flame-resistant ABS, ABS alloys and other products

Polyplastics Korea Ltd.

- Sales of engineering plastics Daicel Safety Systems Korea, Inc. Manufacture and sales of automobile airbag inflators
- Taiwan Polyplastics Taiwan Co., Ltd. Manufacture and sales of engineering plastics
- Hong Kong Daicel Polymer (Hong Kong) Ltd. Sales of flame-resistant ABS, ABS alloys and other products Polyplastics (China) Ltd. Sales of engineering plastics
- Guangxi, China Daicel Nanning Food Ingredients Co., Ltd. Production and sales of sorbic acid and potassium sorbate
- Zhejiang, China Ningbo Da-An Chemical Industries Co., Ltd. Manufacture and sales of cellulose acetate and acetic anhydride

Shanghai, China

South Korea

Daicel (China) Investment Co., Ltd. Hub of the production and sales organization in China Shanghai Daicel Polymers, Ltd. Manufacture and sales of flame-resistant ABS, ABS alloys, etc. Daicel Trading (Shanghai) Ltd. Purchase and sales of products in the Chinese market Polyplastics Trading (Shanghai) Ltd. Sales of engineering plastics Polyplastics (Shanghai) Ltd. Sales of engineering plastics Daicel Chiral Technologies (China) Co., Ltd. Sales of chiral columns and technical services for chiral husinesses Shanghai Da-shen Cellulose Plastics Co., Ltd. Production and sales of celluloid and acetate plastic sheet

Jiangsu Province, China

- Daicel Safety Systems (Jiangsu) Co., Ltd. Manufacture and sales of automobile airbag inflators PTM Engineering Plastics (Nantong) Co., Ltd. Manufacture and sales of engineering plastics
- Shaanxi Province, China ⁽¹⁾ Xi'an Huida Chemical Industries Co., Ltd. Manufacture and sales of acetate tow for cigarette filters
- Kentucky, U.S.A. Daicel Safety Systems America, LLC Manufacture and sales of automobile airbag inflators Topas Advanced Polymers, Inc. Sales of cyclic olefin copolymer
- Pennsylvania, U.S.A. Chiral Technologies Inc. Sales of chiral columns and technical services for chiral businesses
- New Jersey, U.S.A. Daicel (U.S.A.), Inc. Purchase and sales of products in the U.S. market
- Michigan, U.S.A. Polyplastics USA, Inc. Sales of engineering plastics products
- Arizona, U.S.A. Special Devices, Inc. Manufacture and marketing of initiators and PGGs

Principal Domestic Locations

Osaka Head Office Tokyo Head Office



Aboshi Plant







Central Research Center

Arai Plant



Topas Advanced Polymers Daicel Safety Systems



Polyplastics Asia Pacific Sdn. Bhd





Daicel Chiral Technologies (India) Private Ltd.



Industries Co., Ltd.



America, LLC

Daicel Safety Systems





Hirohata Plant



Ohtake Plant



Harima Plant



Polyplastics Co., Ltd./Fuji

Chronology of the **Daicel Group**

The Daicel Group has its roots in Dainippon Celluloid Co., Ltd., which was established in 1919 through the merger of eight celluloid producers. Today, the Group specializes in the manufacture and sales of a wide variety of chemical products.

Since our earliest days, we have led the industry in the quality and volume of the celluloid we produce, while engaging in research and development on natural, highpolymer resins, which would eventually replace celluloid. In 1929, we succeeded in the development of acetate plastics, and in 1935, we took a bold step to commercialize cellulose acetate. This entailed the production of acetic acid—a raw material of cellulose acetate-in-house from carbide. This decision led to the handling of acetic acid derivatives products as well, and with this significant step we entered the organic chemicals field.

With the emergence of the petrochemical boom in the 1960s, we began participation in a petrochemical complex project. In 1964, we established Polyplastics Co., Ltd. through a joint venture and, launched an engineering plastics business. Meanwhile, ascertaining the fact that celluloid serves as a raw material for gunpowder, we entered the pyrotechnic devices business, providing gunpowder and other products. This segment eventually bore fruit with the development of automobile airbag inflators.

With the onset of the first oil crisis, we strove to promote decreased dependence on petroleum-based raw materials through such means as using methanol produced from natural gas in the manufacture of acetic acid. In recent years, with an eye on the establishment of a sustainable chemical industry, we are increasing the use of bioethanol. In line with such environmental efforts, an ethylamine plant and an ethyl acetate plant began commercial production in 2007 and 2009, respectively.

Today, the Daicel Group's four flagship businesses encompass cellulosic derivatives, organic chemicals, plastics and films, and pyrotechnic devices. Through these businesses, the Company has attained high global market shares for such products as triacetyl cellulose (TAC) for use as a raw material of films for liquid crystal displays, chiral columns, polyacetal (POM) and automobile airbag inflators. Through the provision of these and many other products, we are contributing to the development of society.





- force (2005). • Great East Japan Earthquake (2011)
- Economic growth accelerates the EU and BRIC nations.



Special Feature 1: Human Resource Development

Monozukuri Entails the Development of Human Resources

—Acquiring insight into the fundamentals of manufacturing in the first year with the Company

Daicel's Training Program for New Employees

Daicel provides all new employees with one year of introductory training for manufacturing operations. Through this training program conducted at the H.R. Training Center, new employees initially learn the basic knowledge required of businesspeople while acquiring a fundamental grounding in Company policies and other requirements for Daicel Group members. This is followed by on-the-job training (OJT) at the Operation Training Center and production sites, where trainees are acclimated to the eight-hour-shift system. Through these activities, our new employees acquire the essential knowledge required to perform their duties in a manufacturing workplace.

→ Training seminars for new employees (annual schedule)





Ayumi Otani Responsible for Personnel Group H.R. Training Center Corporate Support Center Daicel Corporation

All new employees fresh out of college are initially assigned to a plant and undergo one year of training in manufacturing, during which they are taught the fundamentals of manufacturing and plant operations, in addition to classes on the responsibilities of being a working member of society and on-the-job training on the front line of production. Plant training consists of instruction on basic facilities and the eight-hour-shift system, allowing new employees to actually see, hear and feel what it is like to be in a plant, and this experience deepens their appreciation of safety, quality, costs and the environment—the watchwords of plant operations. They are also taught individual subjects relevant to each work area. While receiving advice and guidance at the workplace, trainees come into contact with the support teams in each work area. Through this training, we aim to give new employees an appreciation of what it takes to aspire to do "our best in manufacturing."

Manufacturing Training Promotion System

After meeting with managers in each work area, new employees are assigned to senior trainers in charge of their education. Office workers in the Personnel Group proceed through a training curriculum and cross-discipline training at each workplace.



Meet the Senior Trainers that Educate New Employees about Manufacturing

Through one year of training in manufacturing, new employees gain experience on the front lines of production and acquire a basic knowledge of manufacturing and plant operations. We also hope they learn to function well inside an organization, and take pride in their work as they become more independent and take on more responsibilities.



Nobuyuki Hirabayashi Production Group Production Management, Aboshi Production Center Organic Chemical Products Company Daicel Corporation

Senior trainer at Aboshi Plant

I have worked as a senior trainer in manufacturing for about seven years, and I have had the privilege of instructing a lot of trainees. Our current crop of new employees has been labeled the "relaxed generation" by society, but from my perspective as a trainer, I do not think this label applies to our trainees. There are not very many trainees who can immediately begin to think and work on their own. This does not mean they lack ability, only that they do not know how to proceed. Each and every trainee has a hard time adapting to their new work environment, such as learning how to think like a technician and developing relationships with their coworkers, but they tackle these and other issues with gusto on their own initiative. As a trainer, I believe it is important to follow up on my trainees and make sure they experience as many successful outcomes as possible, which builds up their confidence considerably and takes them one step closer to being independent when the training comes to an end.

As we move forward, it is my hope that we can work together to produce excellent products for the world without forgetting the intricacies of manufacturing and the great experiences we shared over the past year.



Keizo Odawara No. 2 Plant Production Technology Daicel Safety Systems Inc.



After their first year of training, all of our new employees will take on work in different roles that are essential to corporate operations, such as marketing, development and manufacturing. However, there is one thing that connects us all: "Daicel is a manufacturing company."

The first year for our new employees is filled with experiences in manufacturing, and these initial experiences become building blocks for the future. Since we contribute to society through manufacturing, we naturally have systems in place to ensure safe operations and prevent defects in quality. I think it is important that trainees experience the manufacturing workplace, form their own ideas while learning from highly experienced and knowledgeable senior employees and have the courage to communicate these ideas to everyone. Only after you form your own ideas is it possible to relate to the opinions of other people and reflect on them as well. Success will also bring them feelings of happiness and joy. I wish the best for our trainees as they contribute to society through their work at Daicel.



Masataka Miida Process Development Center Production Management Cellulose Company Daicel Corporation



Over the one-year training period, I teach trainees the basics of being a working member of society and a technician, such as how to properly greet people and basic technological knowledge. The trainees also experience the eight-hour shift system and see what it is like to have the production division and other divisions work together to achieve safety and stability in operations.

Training in the principles of 35^{*} and infrastructure maintenance entails the use of before/after worksheets as an aid in the process of identifying a problem, communicating the problem, and working together to solve the problem. My instruction emphasize the importance of maintaining the infrastructure that enables manufacturing activities and the importance of working according to a plan and communicating well with others.

In training on individual technical issues, trainees learn about chemical engineering and problem-solving techniques, getting equipped with the tools for success as they work on their own initiative to tackle challenges with passion. Drawing on their training and instruction at the Operation Training Center and temporary assignments, trainees can recall the basic actions and prepare to take on work assignments in their second year.

As a senior trainer, I am honored to have the pleasure of growing together with my trainees as they train in manufacturing.

*3S is seiri (tidying), seiton (putting everything in order) and seisou (cleaning).



Takayuki Murafuji

Arai Production Division, PC Office Organic Chemical Products Company Daicel Corporation



During the one-year training in manufacturing, trainees are able to directly experience the manufacturing process and see how operations are conducted at plants. Trainees actually work together with operators under the eight-hour shift system in order to gain a full appreciation of the safety, quality, delivery and cost issues that can arise and cause conflicts.

By taking responsibility for specific issues, forming their own ideas and acting on them, I believe our trainees are able to understand the importance of *ho-renso* (reporting, contacting, and consulting) and learn how to make progress at work. Although the new employees have failures as well, I impress upon them that these failures are valuable experiences to reflect on and learn from as they accept more responsibility in their work and engage in work more independently.

When I hear that a new employee is doing well at their new assignment, I think back happily on the year of training that we went through. I hope that they benefit from their training in manufacturing and apply this experience to their new work assignments.

Daicel's One-Year Training Program in Manufacturing

New employees are trained in the following curriculum during their first year.

1. Introductory training and basic action training for new employees

New employees at Daicel receive instruction in the following core subjects.

- \diamondsuit Basics of being a working member of society
- Proper greetings and business manners
- 3S principles: *seiri* (tidying), *seiton* (putting everything in order) and *seisou* (cleaning)
- Reporting, contacting and consulting process
- Strict adherence to work hours and rules
- Stringently follow safety rules
- PDCA process
- Basic actions in manufacturing

Field training is also included in the curriculum, and tests of physical strength and mountain hiking activities may be physically tiring. Field training aims to foster an appreciation of the basics and create cohesive teamwork among incoming employees.







In my introductory training during the day, I learned the basic manners I needed to know as a working member of society, and the fundamentals of manufacturing at Daicel. In the evening, I went out for dinner and drinks with other new employees to build stronger relationships. Thanks to these two weeks of training, I now know what is basically expected of me as a working member of society and have established good relationships with other new employees that will eventually be assigned to bases around Japan.

My basic action training taught me the challenges of safely and reliably operating a plant. The trainees were able to run their own test plant for educational purposes. This type of on-the-job training left a lasting impression on me, and greatly aided my preparations for future work.

4. Interim report

The knowledge and experience that trainees gain through the introductory training, on-the-job training and eight-hour shift system training is evaluated to ascertain the basic effectiveness of the training. The results of this reassessment is summarized and reported in meetings with top management at each workplace.

5. Specialized education for technicians

Technicians receive instruction in basic required subjects. In-house instructors hold 26 classes in the following nine fields.

- Overview of chemical equipment
- Process management
- Plant control theory
- \bullet Basics of unit operation in chemical engineering
- Quality management technology
- Production planning
- Physical property analysis
- Technology-related laws and regulations
- Legal affairs



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| April | May | June | July | August | September | October | November | December | |
| | | | | | | | | | |

2. On-the-job Training

By seeing with your own eyes what is happening on the manufacturing floor, trainees learn the basic actions of manufacturing while helping out in the work area.



Yuya Nakajima R&D Center of MSD Division

Aerospace & Defense Systems/ Safety Systems Company Daicel Corporation

While receiving on-the-job training during the day shift at the Harima Plant, I was able to put into practice the 3S principles, such as by weeding and painting, as well as get a basic education and hands-on experience in work processes and products in several divisions. These experiences taught me that work requires getting involved with the people around you, and the importance of communicating with these people. When working here in the future, I will make an extra effort to communicate effectively.

3. Eight-hour shift system training

Trainees work in manufacturing under an eight-hour shift system to give them an understanding of the importance of reliable plant operations, safety and quality. Through actual work with operators, they are exposed to the most important aspects of manufacturing processes and apply these lessons to their future work.





Koichi Eguchi Green Product Development Center R&D Management Daicel Corporation

As a trainee in the eight-hour shift system, I was involved in the production of pharmaceuticals and the trial production of newly developed products. Through hands-on training, I learned that each product is manufactured in an environment where extensive measures are taken to manage safety and quality. I discovered that pharmaceuticals are produced based on strict management standards called Good Manufacturing Practices (GMP), and I learned that trial production is undertaken with robust safety measures, including prior assessments. Through these experiences, I was able to see how complex manufacturing can be, and the amazing power of technology to create things.

6. Training for individual subjects

While receiving guidance from senior trainers at the workplace, trainees become familiar with basic knowledge and basic actions through work experience. In particular, trainees are encouraged to form their own ideas about safety, quality, costs and the environment while reporting, contacting and consulting with senior trainers, and then apply this knowledge to solving specific issues.





7. Final report



Yuki Tsukamoto

Cellulose Production Management Cellulose Company Daicel Corporation

In my one year of training in manufacturing, I realized the challenges and hardships involved in manufacturing products through my experiences on the manufacturing floor. I also developed an appreciation for the importance of having a clear sense of purpose when working and grasping the inner workings of processes. At the final report meeting, I learned how to look at things from the viewpoint of technical staff. I will do my best to apply the things I have learned in training to my future work.



February

March

8. Official assignments

After one year of training, new employees are given official assignments based on their individual qualifications.



lanuarv

Yoshito Nakai

Process Development Center Organic Chemical Products Company Daicel Corporation



In training for individual subjects, I began to propose solutions to issues that I confirmed at manufacturing sites. To get to the root cause of the problem, I formulated a plausible theory based on the accumulated data, went through the reporting, contacting and consulting process with superiors, and discussed the issue at periodic meetings. By repeating these steps, I closed in on solving the issue. In the end, I was able to fill in the gaps in my knowledge and propose an effective solution to the problem. Training for individual subjects instilled in me the independence I need to tackle problems on my own after my first year.

Corporate Ethics Training

Following a keynote speech by the president on corporate ethics to employees, corporate ethics workshops were held at corporate headquarters in Tokyo and Osaka as well as at all other business locations for the purpose of enhancing employees' awareness of the importance of corporate ethics.

A Message from the Corporate Compliance Program Division

Background to the Establishment of the Corporate Compliance Program Division

In the past, Daicel has faced litigation overseas that ended in a large settlement. Based on lessons learned from this experience, the Company made a commitment to prevent a recurrence and avoid behavior that may be construed as illegal, vowing to nip any such behavior in the bud internally before it can develop into a problem. In the same vein, the Corporate Compliance Program Division was created for the purpose of instilling a corporate culture of ethical excellence through effective educational programs on corporate ethics.

Illegal Behavior is Not Justifiable Under Any Circumstance

Since the establishment of the Corporate Compliance Program Division, society has evolved considerably and corporations are now viewed in a harsher light. Each day, newspapers seem to carry a stories about a corporate scandal. A major concern recently is that the offenders often say they did it "for the company" after a corporate scandal is uncovered. Looking at the circumstances from an objective point of view, actions that raise questions regarding their legality taken "for the company" or



Hajime Komada Responsible for Corporate Compliance Program Division Daicel Corporation

actions that "conceal illegal behavior" do not end up being of any benefit whatsoever for that company.

What is Expected of Us

We are expected to (1) follow social norms in addition to laws and regulations and (2) have the courage to raise our voices when we notice our behavior is not following social norms and then quickly remedy the situation.

A Message from the President

We Must Not Forget Lessons Learned in the Past

When an accident happened at a neighboring plant, we recalled the past accident at our Sakai Plant and how we proclaimed at the time that it would never happen again. Three decades later, however, many of our employees who did not share this experience cannot remember the event. Corporate ethics is the same—some of our employees are unable to relate to the events surrounding the establishment of the Corporate Compliance Program Division, even in the context of corporate ethics. Due to this gap in awareness, I would like to take this opportunity to talk about the importance of corporate ethics.

Do Not Seek Immoral Gain

First of all, I want to stress that doing the right thing comes before profits. Someone who says "the system is bad" or "I did it for the company" as an excuse for their behavior, despite being aware of the law, is simply unacceptable. With one scandal, a company can instantly lose all of its credibility with society. As a company or as an individual, we should always bear in mind that we must not engage in behavior that would cause a scandal. Making a profit by doing the right thing is the best and only way. We do not seek to gain from immoral actions. Even if someone can gain over the short term from immoral behavior, this behavior will backfire eventually. Daicel is committed to taking the morally right path.

Can You Tell Your Family What You Did?

The Daicel Group has around 10,000 employees globally, with several thousand in Japan. With so many employees, probability says that the Daicel Group is just as likely to be impacted by an incident as any other global company. Harassment, be it power or sexual, is one such thing we seek to prevent. While it may be difficult to settle on a standard for determining harassment, it is important to define a standard for appropriate behavior. For example, ask yourself if you could tell your family about your behavior with dignity. This is one standard we can reflect on if perplexed about a situation.

Look Ahead from a Higher Vantage Point

Looking ahead from a higher vantage point gives a company or an individual a better perspective on their current situation. It is important to talk with others around you instead of keeping what troubles you pent up inside yourself. It is equally important to be there for someone in need of help. Talking with someone is key to deciding on the best course of action to take.



Misao Fudaba President and CEO, Daicel Corporation

Holding the Line

A few months after I was appointed president, I received a report about some minor trouble at a plant. We responded immediately and soon after the problem was fixed reported the incident to the relevant authorities. Apparently, the initial response at the plant took care of the problem, and those involved decided that reporting the issue to the authorities was not necessary because it was resolved (also, they may have put off reporting it because product inventory shortages were affecting shipments at the time). In this case, I think it was difficult to decide whether it was necessary to report the incident to the authorities. I asked everyone involved to reconsider, viewing it from the perspective of people that witnessed the trouble at the plant and thinking about whether the incident really should not be reported to the authorities. In the end, we decided to report the incident to the authorities a while after it happened.

Thereafter, we held ad hoc meetings with general plant managers about when trouble should be reported, and had them reassess their standards for determining when a report should be made immediately.

My stance on this and all other issues is as follows. I want to hear about any problems or trouble immediately. I suspect many employees will debate about whether to report an incident to the president or to take care of the problem on their own. In these circumstances, I expect our employees to reach a decision while adhering to corporate ethics.

All of the directors, including the advisor, the chairman and myself, are asking our employees to choose the right path. I hope these words will be helpful if they find themselves in a predicament. Let's take the righteous, morally correct path together.

Corporate Ethics Initiatives Undertaken by Each Division

At Daicel, employees engage in some non-business activities once in a while, and one of these activities is corporate ethics. At each workplace, employees conduct corporate ethics activities on their own initiative. This entails not only having an opportunity to think about corporate ethics, but also opportunities to increase their awareness of corporate ethics and compliance by studying subjects relevant to their situation. What kind of corporate ethics activities are being undertaken in each division? Here, we take a closer look at some of the activities undertaken during a typical month by the Corporate Support Center's IT group.

Corporate Ethics Activities in the IT group

Corporate ethics activities often do not have a direct connection to daily business activities. At the systems group, we wanted all employees to be interested in and able to proactively participate in corporate ethics activities and then continue these activities every month. We also wanted to make this a platform for communication and provide them with some insight into their coworkers' activities by discussing issues slightly different than their own daily business routines.

The systems group has about 30 employees divided into four teams of 7 to 8 people to conduct CSR activities. Leaders of each team are rotated every year, mainly among the younger members, so each employee has a chance to be the leader once every few years. Meetings are held once a month to talk about predetermined subjects. The leaders think of various ways to make it easier for the participants to talk openly. For example, they create quizzes about the subject matter and ask experts from other divisions to give in-depth talks. These activities also help create personal connections throughout the Company, a valuable side benefit. Leaders can freely choose subjects, allowing everyone to discuss various topics. The main task of the leader is to create an environment conducive to the free exchange of opinions among all of the participants.

The topic this month was our information system security policy, a subject close to the systems group. After everyone takes a seat, the policy is read through from start to finish.

When reciting something, someone usually reads it aloud to the end, or everyone reads it together in unison. However, we do it differently in the systems group. If there is something someone does not understand, they ask a question during the reading, and someone else answers. We also discussed how this policy came to be, and when we need to be aware of this policy when working. We also delved into specific examples based on past experience in order to deepen our understanding of the meaning of this policy. Even if the subject is not related to our work, we take the same approach.

In these meetings, we do away with titles and rank. We have an implicit understanding that people must ask questions about areas they do not understand, people that know the answer to these questions reply right then and there, and if nobody knows the answer, we research it and notify every team member of the answer at a later date. In this meeting, several opinions were aired, including one that questioned whether the policy was up to date with modern information technology. As the corporate activities of the Daicel Group now take place

around the world, the role of the systems group has expanded to a global scope. During the policy reading this month, some participants asked how overseas Group companies were addressing information security and whether the current structure was sufficient to support overseas Group companies. These kinds of questions related directly to the daily routines of the systems group. If the opinions aired are about topics related to work, they are forwarded to managers in the division. Answering any questions raised by younger employees about corporate ethics is a part of the educational process and may even lead to different and new ways of thinking about and viewing the issue. In these situations, younger employees are able to dig deeper into issues with their more senior coworkers.

As shown in this example of corporate ethics activities by the systems group, these activities go beyond simply raising awareness of corporate ethics and serve as a venue for fostering communications on multiple fronts. With discussions in a positive environment that occasionally turn

OICE OF PARTICIPANTS

- Subjects tend to become stereotyped as corporate ethics activities continue, but the team leaders are good at making the subjects more interesting by relating them to recent events around the world and making quizzes. We all welcome the views of other participants, regardless of their work title and age.
- I think our discussions increase awareness of social norms and company rules, and present good opportunities to reflect on recently taken actions.
- Corporate ethics and CSR seem like complex topics, but since we talk about them using case examples and guizzes, it is easier to draw a connection to the work we actually do. This lets us share opinions and debate the subjects in a lively setting.
- Every month we cover a part of the Daicel Group Conduct Policy with readings and quizzes, and this has helped me understand how corporate ethics and CSR comes into play in answering the little questions that arise every day.
- Even members with relatively little experience like me are appointed as leaders of the team meetings, giving us a great chance to learn about what to say and how to run a meeting.
- The team meetings are an opportunity to learn something new about my coworkers.

into laughter, these meetings are educational and also facilitate conversations about subjects that are difficult to bring up in our daily routines. Our aim is to have meetings that are invigorating as people present new ideas and techniques to approach issues. Before we know it, these meetings will lead to a higher awareness of corporate ethics.



Initiatives Aimed at Ensuring Safe and Stable Operations

Introduction

In recent years, several large-scale explosions and fires have broken out in the Japanese chemical industry.

It is pointed out that these major disasters were caused by a cascade of failures due to inadequate transfer of skills and technologies upon retirement of experienced workers, aging facilities and rigid management organization, after more than 50 years' operation since the rise of the Japanese petrochemical industry. These failures correspond to human, facility and organizational factors—the so called three essential factors for accidents.

In August 1982, Daicel's acrylonitrile butadiene styrene (ABS) polymer facility at the Sakai Plant (Closed) burst into flame and exploded, causing damage to surrounding areas. Everyone at Daicel was completely shocked by the accident, and the Company saw this as an opportunity to radically change its approach to safety.

In order to ensure safety at its chemical plants, Daicel established a framework for comprehensively assessing safety in all of its business activities. To properly implement this framework, Daicel needed to foster a



Yoshimi Ogawa



General Manager of Production Technology Management, Responsible for Responsible Care and Engineering Center

corporate culture of safety and improve the knowledge and technological capabilities of its employees. Daicel has two major initiatives to achieve these goals. The first is the Total EHS Assessment System, and the second is Daicel Production Innovation, an undertaking to dramatically change manufacturing. I believe these two initiatives have had a major impact on reducing the three risk factors for accidents.

As an employee of Daicel, each of us commits to steadily improve our safety culture through diligent efforts, with a strong will, toward achieving reliable plant operations. In this special feature, we highlight these two initiatives.

Total EHS Assessment System

In the late 1980s, Daicel began to introduce comprehensive assessments in the Organic Chemicals segment as a system for evaluating risk in its business activities. Since 1995, the Daicel Group has administered its Total Environmental, Health and Safety Assessment System ("Total EHS Assessment System"). Under the Total EHS Assessment System, a prior assessment of diverse risks associated with all business operations in new plans-including planning, R&D, production, consumption and disposal—is initiated in order to ensure thorough consideration of environmental, health and safety issues in new plans. The main components of the system are as follows.

- (1) New plans are checked against a prescribed list of assessments in eight categories: legal compliance, environmental preservation, operational safety at facilities, occupational health and safety, distribution safety, chemical substances safety, product safety and safety of production outsourcing, purchasing and sales.
- (2) New plans identify all new changes, including new facilities, improvements and modifications to operational conditions. New plans are evaluated and ranked according to their scale and risk as a result of Total EHS Assessments performed by each plant and company and a Total EHS Assessment conducted by headquarters.
- (3) We carry out "Technical Assessment" and "Equipment Design Assessment", underscoring the importance of design specifications for technologies and facilities. After a discussion of the results of these assessments, the final Total EHS Assessment is determined.

The number of Total EHS Assessments performed by headquarters, which evaluates new plans with the highest ranking, has surpassed 500 since the system was introduced. In accordance with global business expansion, the Total EHS Assessment System has been implemented at overseas production bases since 2010. We now aim to strengthen the system further by integrating it with the Daicel Production Innovation initiative.

The Monument for Safety



In 1984, two years after the disastrous explosion at the Sakai Plant, Daicel built the Monument for Safety on the site of the accident as a symbol of its commitment to never let an accident on this scale happen again. In December 2007, the monument was moved to the H.R. Training Center after the Sakai Plant was shut down and the land became vacant.

new employees.

Outline of Total EHS Assessment System



Headquarters conducts a Total EHS Assessment of new plans ranked by scale and importance (new processes, etc.). Evaluations are undertaken by the Assessment Evaluation Committee, a collection of experts from Group companies.

Basic process

Evaluations are undertaken of new plans ranked by importance by a plant assessment leader and Assessment Evaluation Co composed of experts

Breakdown of Total EHS Assessment System

Categories of the Total EHS Assessment System

| Legal compliance | Evaluate conformity with laws |
|--|---|
| Environmental preservation | Evaluate based on environment-related laws and regulations |
| Operational safety at facilities | Evaluate risk of explosion and fire Assess results of other evaluations and fitness of relevant facilities |
| Occupational health and safety | Evaluate conformity in context of preventing labor accidents |
| Distribution safety | Evaluate distribution safety |
| Chemical substances safety | Evaluate hazards posed by all chemical substances handled |
| Product safety | Evaluate products for risk of causing bodily injury |
| Safety of production outsourcing, purchasing and sales | Evaluate from perspectives of the environment, safety and preventing occurrence of health problems |

→ Relationship of technical and equipment design assessments to Total EHS Assessment System



Specifications, material guality, maintenance system, etc.

The Monument for Safety is a symbol of each and every employee's commitment to safety. Daicel will never stop working to improve safety by continuing to discuss the importance of safety and lessons learned from the accident at training sessions, including introductory training for

> The Sakai Plant explosion and fire occurred on August 21, 1982, taking the lives of six employees and causing considerable damage to areas around the plant.

Developing Chemical Plants with Advanced Safety Systems through Daicel Production Innovation*

In the early 1990s, Daicel confronted two challenges in the chemical processing industry. The first was figuring out the best way to pass down the technological skills and expertise of experienced operators, who were retiring in large numbers, to the next generation of employees. The second was determining the best way to strengthen the international competitiveness of its domestic production bases amid rapid yen appreciation. Its solution to these two challenges was the Daicel Production Innovation System, which led to improvements in safety, reliable operation, and guality.

Daicel Production Innovation is a step-by-step program with stages numbered from zero to three. Below, we highlight the features of each stage to achieve safe and reliable operations.

Production Innovation Initiatives

Stage 0: Preliminary investigation—meticulously assess current conditions

Preliminary investigations are led primarily by the workplace manager, who initiates the process of revealing and identifying problems (waste, loss, etc.) in work and business processes (roles of employees and organizations, decision-making methods, etc.) using Daicel's unique methodology, which includes operator workload analysis during both regular and irregular operations and general work inspections.

Stage 1: Stabilize operations

The workload of operators is reduced by eliminating the waste and loss discovered during stage zero. A work environment is then designed in a way that is easy for any employee to understand based on the same rules, signs and symbols used at all plants.



* For more information related to Daicel Production Innovation, please refer to the following. Ministry of Economy, Trade and Industry's Report on Production Innovation Research http://www.meti.go.jp/policy/mono_info_service/mono/chemistry/seisannkakusinn.html The Daicel Group's CSR Report 2010 http://www.daicel.com/csr/library.html

Stage 2: Bring to bear all know-how and expertise

After classifying events according to regular operations, irregular operations and abnormal operations, we bring to bear all of our technology, expertise and know-how to address issues concerning safety, guality, production volume and costs through general operability studies. Operations are standardized based on the results of technological evaluations.

Stage 3: Establish and operate an intellectual and integrated production system

The results of standardizing operations and other outcomes are integrated into a non-regressive framework that is then incorporated into an intellectual and integrated production system in order to achieve further improvements. Specifically, we build systems that anyone can use, including (1) an anomaly warning and prediction system to catch abnormalities before they appear, (2) a decision-making support system that helps with decisions and operations with an easy-to-understand alarm dashboard and (3) a work education system that calls up principles and rules for regular operations (know-why data) and links to historical cases on anomalies.

Successful Results

We applied this process first to the Aboshi Plant to solve issues this primary facility had been struggling with at the time and successfully made improvements. To this day, we continue to make improvements by analyzing anomalies that appear in daily production activities based on general operability studies, and reflecting the results into an intellectual and integrated production system. We are constantly working to maintain and improve safe, reliable operations.

Daicel currently implements production innovation at all Group bases and furnishes licenses to other companies that request an introduction to the method.



Operations room of the integrated production center at Aboshi Plant

A People-Centric Method that Fosters Personnel

Seventeen years have passed since we launched Daicel Production Innovation, but our objective is not to systemize these efforts. To this day, all employees work to discover and solve problems by sharing their knowledge and wisdom, as we continue to apply the cycle of "Mieru (Visualization)", "Yameru (Stop and think)" and "Kawaru (Improvement)". Daicel Production Innovation is a people-centered method that strives to foster a culture, systems and people that share knowledge and wisdom.

Operation Training Center

In 2002, Daicel established the Operation Training Center for the purpose of exposing employees to operations technologies common across Group companies and simulations of operations during past anomalies and episodes of operational stops and starts.

The curriculum of the Operation Training Center is divided into three fields: knowledge, experience and actions.

Trainees include not only operators, technicians and new employees, but also workplace managers. The Operation Training Center also offers education on the methodology of Daicel Production Innovation and historical education on the background and purpose of various rules and regulations.

In March 2013, the "new" Operation Training Center was completed, and it now offers better crisis simulation training owing to limited opportunities to experience troubles, in addition to basic action training as in the past.

TOPICS

Opening Ceremony for the "New" Operation Training Center (March 29, 2013)

The Operation Training Center has trained 2,400 employees since it was opened in 2002. We decided to update and expand the Operation Training Center to accommodate an expanded curriculum that addresses recent needs an increase in the number of training courses and handling more trainees. The "new" Operation Training Center is able to offer more functional education and training with its upgraded training rooms, plant operation rooms and hands-on rooms, as well as a new facility for crisis simulation classes. Since it was established, the center has been managed based on the philosophy of "starting with the basics and returning to the basics," and this tradition continues today. We will continue to foster excellent people that will support Daicel's manufacturing activities of the future.

What is...? General operability studies: Daicel's proprietary method of standardizing plant operations. This method exhaustively codifies decision-making techniques for how to operate a plant under all imaginable plant and 17 operating conditions, based on sensor and alarm data received during plant operations

Knowledge

- Common basic knowledge (general knowledge)
- Specialized skills (for each occupation, division, individual)
- Non-technical knowledge (languages, finance, costing, legal affairs, corporate ethics, etc.)

Driving force

Experiences

- Experience success as a leader (leaders)
- Experience successes in engineering, construction and operations Experience successes in engineering, construction and operations
 Experience turning research topics into marketable products
 Market responses, foreign cultures

- (overseas experience, etc.) Other

Action (style)

- Action with comp (delivery deadlines, safety, cost awar KY hazard prediction, 3S principles)
- Problem discovery and resolution
- (standardization, assessment, decision-making methods, etc.)



Outside the Operation Training Center



Plant operation room inside the Operation Training Center



Products and Technologies that Contribute to

Every company in the Daicel Group develops products and technologies that contribute to a healthier environment, providing customers with environmentally friendly products and safety.

Daicel Corporation

Printable Electronics Materials: Silver (Ag) Nano Ink

Printable electronics use printer technology to print electronic circuits. This method is expected to revolutionize the production process for thinfilm displays, electronic paper and organic EL lighting, among other technologies. Against this backdrop, Daicel has been developing silver (Ag) nano ink and paste as a replacement for the copper foil used in conventional electronic circuits. Ag nano ink is a conductive ink for fine wiring applications. It consists of Ag nanoparticles with an average diameter of just several tens of nanometers that are distinctly interspersed in the solvent. Through a sintering process, these Ag nanoparticles are united and the resultant circuits have superior conductivity. The Ag nano ink under development at Daicel can be sintered at low temperatures, which leads to energy savings.

CELVENUS™ T Series of Transparent Encapsulants

The CELVENUS[™] Series of LED encapsulants was developed from a fusion of Daicel's proprietary formulation and chemosynthesis technologies accumulated over many years.

The CELVENUS[™] T Series of Silicone-based encapsulants are newly launched, used in high-luminance LEDs for LCD backlights and LED lighting, products that are in high demand around the world. The CELVENUS[™] T Series offers better heat resistance than other Siliconebased encapsulants currently on the market. Also, the CELVENUS[™] T Series exhibits excellent gas barrier properties, which protect the silver plating on LED electrodes against discoloration, in turn, preventing degradation in LED luminance. By marketing the CELVENUS[™] Series, Daicel contributes to the protection of the global environment by expanding the range of applications for eco-friendly LEDs.



CHIRALFLASH

Medium pressure liquid chromatography (MPLC) is a simple technology of separating and purifying targeted chemical compounds, and is widely used throughout the world. Daicel is the first company in the world that launched chiral MPLC columns packed with immobilized Chiral stationary phases. The column hardware, consisting of fluorinated-resin column body and solvent resistant fillers, makes CHIRALFLASH[®] an environmentally friendly chiral MPLC column that can be reused many times. Daicel has recently expanded the product lineup, adding ID and IF versions to the CHIRALFLASH[®] IA and IC.



CHIRALFLASH® Series

Daicel Polymer Ltd.

Non-Edible Biomass Plastic CELBLEN EC

Daicel Polymer has launched the CELBLEN EC Series of non-edible biomass plastics. The CELBLEN EC Series are cellulose ester plastics containing 40-50% plant-based materials derived from wood pulp. CELBLEN EC has an advantage in the procurement of raw materials compared with PLA (Polylactide), which is derived from corn, because cellulose is bountiful in nature and is available anywhere around the world. CELBLEN EC can also contribute to building a sustainable society, because it does not have any negative influence on potential food shortage problems resulting from an increase in the world population.



Example of how CELBLEN EC is used

Daicel Pack Systems, Ltd.

Celcompact[™] Eco

Consumers are inconvenienced by plastic containers that are bulky when thrown away, as they take up too much space. The Celcompact[™] Series of plastic containers can be easily twisted and crushed by hand, and they retain their crushed shape, thereby reducing the volume of waste.

In addition, CelcompactTM plastic trays are sturdy, do not break easily, and are thinner, making them lighter. Compared with regular polystyrene-based plastic trays, CelcompactTM trays take up less waste volume and use less energy in transportation, thereby helping reduce CO_2 emissions.

a Healthier Environment and People's Safety

Daicel Pack Systems recently launched CelcompactTM Eco as an ecograde version of CelcompactTM. It uses natural biomass raw materials for even greater reductions in CO_2 emissions. CelcompactTM Eco has received the Biomass Mark certification, a symbol of environmental friendliness.



Daicen Membrane-Systems Ltd.

E mizu Shower Environmental System

The E mizu Shower environmental system is an outdoor misting system developed using many years of accumulated expertise in reverse osmosis (RO) membrane technology. The system sprays water on air conditioning systems and other outdoor equipment, increasing their energy efficiency and reducing CO₂ emissions. Spraying water on outdoor equipment increases thermal conversion efficiency and reduces strain on air conditioners and other equipment, but regular tap water and well water contains minerals and other compounds, such as residual chlorine, that can cause corrosion and scales to form in the thermal exchangers of outdoor equipment. This worsens the capacity of air conditioning equipment and wastes energy. The E mizu Shower system sprays a water mist that has been treated by RO membranes, thereby removing any compounds that may harm thermal exchangers. It improves cooling efficiency and helps reduce energy consumption by preventing the formation of mineral deposits and corrosion that would degrade operating efficiency.



E mizu Shower installed on outdoor air conditioning systems

Daicel FineChem Ltd.

CelMuse™ Visible-Light Photocatalysts

A photocatalyst is a material that triggers the decomposition of chemical compounds, which can cause grime or odors, when exposed to light by using water and oxygen in the air as intermediaries. During this process, the photocatalyst itself does not change. Photocatalysts are gaining attention around the world as an environmentally friendly technology because they simply work if there is light.

Until now, photocatalysts did not perform satisfactorily in weak indoor light. However, Daicel FineChem's CelMuse[™] photocatalysts can be used under indoor lighting such as fluorescent bulbs to eliminate odors and bacteria. It also works well under LED lighting, which has been gaining popularity.



How CelMuse[™] works

CelcreteH[®], Antiwashout Admixture for Underwater Concrete

When undertaking sea or river work, such as the construction of ports, embankments, breakwaters and bridges, conventional concrete immersed in water will be separated and lacks the necessary strength and performance.

Boasting outstanding water retention and adhesive properties, CelcreteH[®] is an agent that when added to cement enables high-quality and effective construction. At the same time, CelcreteH[®] helps to minimize the severity of water pollution in rivers and seas. Following the Great East Japan Earthquake, a large number of ports and coastal roadways were severely damaged. CelcreteH[®] continues to play an important role in reconstruction activities.



CelcreteH® used in underwater concrete placement activities

Human Resource Development Initiatives

Basic Policies for Personnel Training

Of the Daicel Group's many management resources, people are the most important. From around the globe, the Company welcomes a diversity of individuals, each contributing different backgrounds and ways of thinking, who are inspired by the Daicel Spirit. Daicel Group employees respect each other and seek collaborative work relationships, enabling the Group to maximize its collective strength. Toward becoming a company that proudly delivers the best solutions to the global market, Daicel is working to develop its employees so that they can fully exhibit their capabilities, unfettered by title or position, and adopt flexible approaches to best fulfill their responsibilities.

The Daicel Group Seeks

- Those who value communication with others, respect others and can appreciate new situations and perspectives
- Those who can sustain the passion and focus to fulfill their responsibilities, seeing projects through to completion

Personnel System to Support Personnel Development

At Daicel, human resource development is underpinned by various systems and structures. By consistently adhering to the intent of these systems and consistently following these rules and structures, Daicel is promoting human resource development.

"Management by Objectives" (MBO)

MBO is a management system which enables both personnel and the organization to grow together through efforts aimed at achieving established targets. Through biannual meetings, each individual, under the direction of a superior, sets his or her goals in line with the targets of divisions and the entire Company. Individual employees then work to accomplish their goals. In terms of evaluation, we focus not only on results but also on the processes used. We use dialogue between superiors and subordinates as opportunities to allow people to develop their skills and ability.



An interview

System to Hear Employees' Thoughts (Voluntary Reporting System) The self-evaluation system gives employees an opportunity to express their career-development wishes. Once a year, all employees express their frank thoughts and opinions regarding their current job, future posting preferences and work locations. Through dialogue, supervisors consider optimal placement and personnel training programs based on the individual's wishes and aptitude, with the aim of helping them make the most of their capabilities.

Educational and Training System to Support Personnel Development

As a means to promote human resource development, Daicel is strengthening group seminars. Various educational and training programs have been created to meet employee needs, which vary depending on status and type of work, to maximize their effectiveness.

Our Commitment to Technicians

For Daicel, a manufacturing-oriented company, the development of technicians is an important management issue, because they underpin the foundation of the Company's manufacturing operations. Starting with first-year training for manufacturing, technicians continue to receive education aimed at allowing them to acquire various specialized techniques, modes of action and other knowledge required when they become managers in the future.



On the Job training (OJT) at production sites and the Operation Training Center

Training for Newly Appointed Directors at Group Companies

In creating an environment that is conducive to the ongoing development of the Group and its management, it is vital that Daicel puts in place a corporate management training structure and systems for the directors of Group companies. With this in mind, training is provided for directors and corporate auditors newly appointed to the Group's companies in Japan. Training encompasses a host of management and operating issues, including areas that warrant particular attention and concern as well as important and mandatory information essential to driving each company forward. Specific case studies are used to address such specialist fields as legal affairs, accounting, corporate ethics and personnel. The Group takes great pains to put in place a curriculum that helps newly appointed officers gain the necessary observation skills to quickly identify issues of potential concern and to take appropriate action.



Daicel's H.R. Training Center is located within the Harima Science Garden City (Kamigori-cho, Akou-gun, Hyogo Prefecture), which houses the Spring-8 large-scale photon source, the New



SUBARU medium radiation facility, the Hyogo Ion Beam Medical Center and other facilities. The Company opened the H.R. Training Center in 1998 in order to provide a facility in which Daicel employees can study together, communicate and refresh themselves. Since its opening, the H.R. Training Center has been used by many Daicel employees for a number of purposes, including educational seminars, Companywide projects and improvement activities.

Globalization Initiatives

Supporting Overseas Group Companies

The Daicel Group maintains a workforce of approximately 9,000 employees. Of this total, around 5,000 are employed by Group companies overseas. With such a large proportion of its employees spread across the Group's global network, a variety of personnel management and labor support measures are undertaken to enhance the Group's competitiveness through its global workforce and to nurture a greater sense of Group unity.

Harnessing the Group's network. Daicel strives to address a broad spectrum of issues. Specialized advice and proposals play a particularly important role when establishing a new business base overseas. By promoting daily communication, every effort is being made to strengthen collaboration with overseas Group companies.





On Establishing a New Company

When we were going through the process of establishing Daicel Safety Systems Korea, Inc. (DSSK), we put our best efforts forward with the intent of creating an excellent company. While receiving support from the Personnel Group at Daicel, we focused on building a personnel system, hiring personnel, writing up rules and doing the necessary paperwork. Without Daicel's support, I think it would have been a lot harder because we did not have enough people at DSSK to do all of the work. With the globalization of the Daicel Group, I really believe the headquarters has been playing a more significant role in supporting overseas bases such as DSSK on various fronts.

By discussing a variety of topics and reconciling our opinions, we were able to work closely together even though our opinions clashed on occasion due to differences in cultures and business practices. Through this process, we were able to deepen our understanding of each other. I hope to strengthen our partnership with Daicel and move together toward further globalization.



Human Resource Development from a Global Perspective

In similar fashion to our efforts in Japan, we are placing considerable emphasis on promoting human resource development at our overseas bases. To ensure a greater sense of autonomy and independence at overseas bases, human resource development and training is undertaken in line with specifically designed local curricula. At the same time, the Daicel Group is actively promoting the development of its local staff at overseas bases supported by training programs in Japan as and when required.

In order to maximize the strengths and capabilities of its Groupwide human resources, Daicel recognizes the critical need to share its basic philosophy and long-term vision with overseas personnel. Looking ahead, we will take steps to incorporate within our human resource development plans, measures aimed at increasing awareness and understanding of the Group's basic philosophy and long-term vision by overseas personnel.



Jeong Hyeon-Sang Daicel Safety Systems Korea, Inc. Deputy Head of Yeongcheon Plant Production Division

Training at the Harima Plant

The first time I went to the Harima Plant was for training. I was impressed that all of the employees wore protective gear (hats, helmets, safety glasses, etc.), and went about their work in an orderly fashion. In my training, I studied and learned about various aspects of explosives. I think good business practices are the foundation for fostering good people, and people are the foundation of manufacturing. I learned that Daicel has good business practices, such as the 3S principles and business manners, and I like how management sets an example by taking the initiative. I am glad to have met and connected with so many people through my training.

With the experience I gained in my training, I will work to help make DSSK a strong company that contributes to society. I am grateful to the trainers and other employees that I had the pleasure to meet at the Harima Plant. I will do my best to fulfill their expectations, and I think the saying below sums up how I feel.

"Training creates genius, faith creates miracles."

Optimal Workplace Creation (Personnel Systems, etc.)

Approach to Diversity

Employment of Persons with Disabilities

As a part of its social responsibility activities, Daicel works diligently to achieve the official disabled persons employment rate. With this in mind, the Company proactively hires persons with disabilities to support the aspirations of these individuals to participate in social activities and to provide motivation in life. Taking into consideration the revision to the official disabled persons employment rate to 2.0%, Daicel is taking systematic steps to comply. We pay utmost attention in assigning jobs according to the degree of disability, in order to help each of these individuals accomplish their best.

Continued Employment System

With the aim of promoting the employment of people age 60 and older, Daicel introduced a system for continued employment in 2003 for retired employees. In fiscal 2012, 29 of 33 employees (continuous employment rate: 88.0%) who reached the retirement age were employed on a continuous basis under this system. In accordance with revisions to the Act for Stabilization etc. of Employment of Older Persons etc., which took effect from April 2013, Daicel is actively supporting continued employment up to the age of 65. We will continue to offer a work environment where veteran employees can make use of their knowledge and experience.

Global Human Resource Recruitment and Development

In order to promote global management, Daicel actively promotes the recruitment and development of global human resources. Of the 36 graduates newly recruited in fiscal 2013, three were from countries other than Japan. The Company also maintains a recruitment policy at overseas subsidiaries that ensure the employment of local staff without discrimination. Through a global human resource development policy, the Company is fostering personnel imbued with the Daicel Spirit, who continue to excel around the world.

Efforts to Promote a Balanced Working Life

Leave-of-Absence and Labor System to Support Each Employee's Personal Life

Amid the ongoing decline in birthrates and an aging population, Daicel established the following systems to develop a working environment in which employees can work in comfort and with peace of mind.

• Child-rearing leave

Employees can take leave to focus on child rearing until the day before their child has reached the age of one (or up to 18 months in certain cases).

• Extended nursing care leave

Employees can take extended nursing care leave of up to 93 calendar days when full-time nursing care is necessary for family members.

• Special leave due to personal accident or illness

Employees can acquire special leave of up to 20 days per year, aside from annual paid holidays, in the event they have a non-work-related

accident or illness and have to be absent from work for over one week. • Family care leave

Employees can shift special leave due to a non-work-related accident or illness to family care leave of up to 10 days per year when a family member falls ill for over one week and requires full-time care.

Reduced work-hour system

Employees can decrease their work hours by up to two hours per day when they need reduced hours due to pregnancy, childbirth (within one year of delivery), child rearing (up to the 3rd grade in elementary school) or nursing care (of family members).

• Promoting the take-up of annual paid leave

Employees are encouraged to take annual paid leave on certain days when drawing up annual plans for each workplace.

Labor and Management Relationship to Support Various Initiatives

Daicel considers the labor union to be an important stakeholder and, accordingly, has established the Labor and Management Charter. With respect to the individual positions of labor and management, management carries out discussions with labor in good faith in order to best develop the Company's business. Through these efforts, we are maintaining and reinforcing a healthy relationship between labor and management. In addition, labor and management committees are set up at each place of work while a variety of measures are undertaken to enhance the implementation of work-hour management and productivity.

earrow Information Regarding Human Resources and Labor Services

| Full-time employees | Regular employees | Male | 1,518 |
|---------------------------|----------------------------------|----------------------|-------|
| | 5 | Female | 173 |
| | Manager and above | Male | 709 |
| | | Female | 10 |
| | Subtotal | Male | 2,227 |
| | | Female | 183 |
| | Total | | 2,410 |
| Other | Contract employees | | 210 |
| | Temporary staff | | 39 |
| | Total | | 249 |
| 2. Average age: | | | 41.8 |
| 3. Average service years: | | | 17.9 |
| 4. Average number of de | 1.1 | | |
| 5. Average annual salary | 672.9 million | | |
| 6. Paid-holiday consump | 66.7% | | |
| 7. Personnel turnover rat | 0.7% | | |
| 8. Recruitment (fiscal 20 | 49 | | |
| | | Mid-career: | 51 |
| 9. Disabled persons emp | loyment rate (fiscal 2012): | | 1.71% |
| 10. Number of reemploy | ed persons (fiscal 2012): | | 108 |
| 11. Number of employee | s who used child-rearing/ | Child-rearing leave: | 4 |
| extended nursing car | e leave (fiscal 2012): | Nursing care leave: | 0 |
| 12. Number of employee | 5 | | |
| nursing care reduced | work hours system (fiscal 2012): | Nursing care leave: | 0 |
| 13. Number of union me | 1,691 | | |
| 14. Ratio of union memb | 64.5% | | |
| 15. Average age of unior | n members: | | 38.5 |

The above data is for Daicel Corporation on a non-consolidated basis.

Workplace Health Promotion (Healthcare Activities)

In 2003, Daicel established a Healthcare Committee, which represents both labor and management. This committee is working to create workplaces within Daicel where individual Daicel employees can exert their individuality and capabilities and promote health throughout the Company's workplaces.

The Healthcare Committee puts forward proposals relating to healthcare, takes steps to carry out measures at each workplace and strives to resolve individual issues. Through a process of collaboration, the committee



Initiatives of the Healthcare Committee

• Healthcare Support at the Daicel Group

As a part of efforts to provide comprehensive support within the Group, nurses address the daily health management needs of staff. At the same time, psychiatrists are employed on an as-needed basis to help employees who have developed a mental disorder.

• Providing Healthcare Education

Daicel implements training that takes into consideration the status of each employee in an effort to deepen awareness toward the importance of mental and physical health while increasing each employee's ability to cope with stress. Through these means, every effort is being made to maintain a bright and invigorating workplace.

• Utilizing a Psychiatrist Employed Exclusively by Daicel

Daicel began employing its own psychiatrist in 2007 in order to bolster

Outline of Care for Body and Mind



also works to promote physical and mental care. In addition to helping employees with mental health problems return to work, the committee implements training while formulating and implementing plans for various activities aimed at identifying employees suffering from poor mental health at the earliest possible opportunity. These activities include the offering of educational programs to prevent physical and mental disorders and the construction of necessary systems. In this way, the committee is striving to promote the improved physical and mental health of Daicel employees.

its follow-up care system for employees who have developed mental disorders. This psychiatrist visits each workplace and arranges consultation services. In addition to supporting the implementation of workplace return programs and mental health training, steps are taken to educate health nurses and to provide information on mental health.

• Health Promotion Activities of Occupational Health Staff

Daicel has employed seven occupational health doctors and eight health nurses, who are providing health services at its two head offices (Osaka and Tokyo), six plants (Aboshi, Hirohata, Harima, Ohtake, Arai and Kanzaki) and one research center (Aboshi). Through health counselor offices at these business sites, doctors and nurses provide follow-up services after regular health checkups while offering consultation, education and guidance relating to healthcare. In addition, they cooperate with Daicel's corporate health insurance society in providing specific medical checkups and health guidance. As such, they are leading Daicel's healthcare activities. Under the slogan of creating workplaces where each employee can exert his or her individuality and capabilities, our occupational health doctors and health nurses are working together to promote health throughout Daicel.



Education provided by occupational health staff

Maintaining Communication with Local Communities

The Daicel Group aims for mutual prosperity with society, which is why we engage in a variety of community-based initiatives and provide support after disasters.

Nurturing Children for the Future

Exhibition at Children's Science Festival

Arai Plant personnel participated in the Children's Science Festival held at the Wakuwaku Land Arai educational facility for children in Myoko City. Sponsored by the Myoko City Education Committee, this event is held every year during summer vacation for children to experience the joy of discovery and arouse their curiosity about science. In 2012, a wide variety of experiments were exhibited at the event by various groups, such as junior high school science clubs and local companies. On the day of the event, 512 children and family members participated. About 100 children visited the Daicel exhibit to try the experiments on display.

Representatives from the Arai Plant put up exhibits and experiments about "the secrets of pen ink." The experiments highlighted the fact that the color of water-soluble ink pens that the children use at school is made from a mixture of various colors. The experiments used common household articles, such as paper coffee filters, clear plastic cups, disposable chopsticks and scissors, so the children could go home and try the experiment again themselves. From the children's happy faces, we could see their interest in science.

Volunteer R&D staff, mainly younger employees, got together to plan and prepare the experiments. All of the staff felt the event was a valuable experience and an excellent opportunity to interact with local children and their parents as well as a great chance to get to know other Group staff better.



Chemistry Experiment Classes Held

A two-day science school sponsored by the Otake City Education Committee was held for elementary school students during summer vacation. Under the banner "I love science experiments," Daicel put on experiments with CMC and cellulose acetate. Although Daicel is a company that most people are not that familiar with, we were able to explain what kind of products Daicel makes by showing samples of end products and explaining how Daicel materials are used in many everyday products. This helped people understand Daicel a little bit better.

We had set up three experiments, and the 25 children that came had a great time with them. One experiment was to make film with CMC. Another experiment used cellulose acetate to make film that floats on

water. In the last experiment, children made soap bubbles with glycerin that were hard to break. The children showed a strong interest in the experiments and they gazed with surprise and amazement at the strange phenomena. The time went by quickly, but we think the children had a great time witnessing the mysteries of chemistry.

Trial Week

Trial Week, conducted over five days, is a program for all second year junior high school students in Hyogo Prefecture, involving field trips out into the local community. Companies, groups and other institutions accept the students to teach them more about their community. In 2012, Daicel welcomed three second-year students for five days during Trial Week from Ibogawa Junior High School in Tatsuno City, Hyogo Prefecture. Daicel takes in several students every year at its Harima Plant, where they learn about preparing documents on computers, help clean the parking lot, help on the front desk for health checkups, sort mail and do other activities. Some employees had their children come to work, and said it was an invaluable opportunity to see their children learning about various occupations.

At first, the children are nervous and somewhat overwhelmed by the sheer number of employees, but by the time Trial Week had ended, they had overcome these feelings with their youthfulness and energy, become accustomed to working at a company and took some valuable experiences back to school with them. We look forward to welcoming students every year, and enjoy watching them greet employees with their loud voices and working hard to remember the basics. It is a special time for us as well as them.



100,000 People Hometown Cleaning Campaign

The Kanzaki Plant at Daicel Value Coating Ltd. participated in Amagasaki City's 100,000 People Hometown Cleaning Campaign, which is held every May. Employees from the Kanzaki Plant cleaned all of the areas surrounding the plant. The campaign has local company employees and other citizens clean the city and surrounding areas themselves in order to foster a sense of community among the participants and to create a brighter and better community. The campaign, which brings together the city, its citizens and corporations, has been held every year since 2008. Daicel approves of this campaign, and has participated since its start as a part of its efforts to contribute to local communities and interact with local residents.

The employees that participated in the campaign said that it was an excellent opportunity to communicate with local residents that they usually have no contact with. They also said they were interested in continuing to help keep the region beautiful through this activity. Our employees at the plant look forward to participating in the campaign as an annual part of efforts to give back to the community.



Polyplastics Co., Ltd. Donates Disaster Response Vehicles to Fuji City, Shizuoka Prefecture

On June 29, 2012, Polyplastics Co., Ltd. donated two disaster response vehicles to Fuji City in Shizuoka Prefecture. The donation was made to commemorate Polyplastics' 50th anniversary and as a gesture of appreciation to the local communities where its plant and research and development center are located.

Fuji City is likely to be damaged in the event of a major earthquake in the Tokai region. The donated vehicles will be used by the city for preventing and mitigating disasters, as well as for transporting material during times of crisis.

In choosing the Vehicles to be donated, a manager from the company worked closely with city representatives to make sure they would be useful and appreciated. Polyplastics Co., Ltd. will continue efforts to build stronger relationships with local communities.

Contributing to Local Communities

Chestnut Picking with Local Children

Japan Shotshell Ltd. holds an annual event for local children called chestnut picking. In October 2012, around 40 people participated, including the children's parents and local directors, in picking chestnuts during the autumn harvest.

The chestnut trees on the plant's grounds were planted several decades ago. A few years ago, a local director said at a community exchange meeting that he would like to have children in the area experience the pleasure of chestnut picking from these trees. This senior local director felt that children did not have enough opportunity to play outside these days.

To get ready and make sure everyone can participate safely, we exert considerable efforts every year to prepare the grounds for this event, cutting the grass and cordoning off the area with ropes to prevent any accidents while being bitten by hungry mosquitoes. This year, many children came to the event and competed to see who could pick the most chestnuts. They had a great time boasting about the size of their bounty.

More and more children participate every year, and this year I saw some familiar faces. Although it is not a big event, I hope it will continue to be an activity that contributes even a little to revitalizing the region and children's development.





Mr. Goto, President (left) and Mr. Suzuki, Mayor of Fuji City (right)

Upgrading CSR Foundations

Corporate Governance Framework

Daicel is a company with the Board of Corporate Auditors. Also, by welcoming external directors and allowing them to provide opinions and advice based on their expertise, the Company is working to ensure that the decisions made by its Board of Directors are appropriate and the execution of director duties is effectively supervised. The Company has also adopted an executive officer system. The adoption of the executive officer systems has enabled the Company to clearly separate its decision-making, supervisory and business execution functions. Such a clear division of roles has allowed us to bolster our business management structure and, consequently, corporate activities. In addition, Daicel has adopted an internal company system. Through this system, the Company is promoting various initiatives aimed at strengthening collaboration among its production, sales and R&D functions, improving productivity and strategic functions within its corporate divisions, and reestablishing its R&D structure.

Based on its corporate auditor system, the Company has established a corporate framework under which its Board of Directors makes management decisions in an efficient manner and fulfills its supervisory functions, and its Board of Corporate Auditors accomplishes its auditing functions. Such a framework has enabled us to keep reinforcing our corporate governance.

Board of Directors

Daicel's Board of Directors consists of eight directors, three of whom have been externally appointed. The Board of Directors meets, in principle, once a month to make decisions concerning important management issues in line with the regulations for the Board of Directors meetings. Furthermore, the Board of Directors supervises the execution of business and operating activities.

At Daicel, external directors are tasked with providing advice and supervisory functions based on their experience and expertise. Two of the Company's three external directors have been designated as independent directors, as defined under the Securities Listing Regulations of the Tokyo Stock Exchange in Japan.

The term of office for Daicel's directors is one year. Such a short term of office

enables Daicel shareholders to increase their involvement in the appointment of directors. At the same time, it allows us to better clarify the management responsibilities of our directors and thereby reinforce our corporate governance.

Board of Corporate Auditors

Daicel currently has four corporate auditors, two of whom have been externally appointed. All corporate auditors are required to attend Board of Directors' meetings. In addition, full-time corporate auditors are required to attend meetings of the Management Meeting, the Risk Management Committee and other important organizations, thereby auditing the overall management of corporate affairs.

Meanwhile, the Company's corporate auditors all together form the Board of Corporate Auditors. The Board of Corporate Auditors holds meetings to report, deliberate and make decisions on important issues relating to the Company's audits.

Corporate auditors regularly receive reports from the Company's internal auditing division and independent auditors. In addition, on an as-required basis, they collaborate—through the exchange of information and opinions—with the internal auditing division and the independent auditors in promoting audits of the Company. The two external corporate auditors have been designated as independent corporate auditors, as defined under the Securities Listing Regulations of the Tokyo Stock Exchange in Japan.

Also, as an organization to support audits by corporate auditors, the Company has established the Office of Corporate Auditors. The Office of Corporate Auditors has its own dedicated staff which is independent from the business divisions.

Management Meeting

Daicel has established the Management Meeting as a body to have deliberations and make decisions prior to its president implementing the basic corporate management policies formulated by the Board of Directors. The Management Meeting consists of the president, directors (excluding external directors), corporate auditors (excluding external corporate auditors) and the executive officers selected by the president as its members. The Management Meeting convenes, in principle, twice a month.



Nomination and Compensation Committee

A Nomination and Compensation Committee has been established. This committee is chaired by an external director and is comprised of external directors as well the Company's chairman and president. In addition to taking into consideration advice from the chairperson of the Board of Directors, the Nomination and Compensation Committee reports on the nomination of and compensation paid to directors and executive officers.

Internal Control Systems

In accordance with its basic policies concerning the development of internal control systems formulated by the Board of Directors, the Daicel Group works to administer and enhance its efficient and effective internal control systems.

We believe that these systems help the Daicel Group sustain steady growth. To accurately grasp the status of the entire Group and as a forum to discuss initiatives aimed at ensuring the effective functioning of internal control systems, Daicel has established an Internal Control Council.

Response to the Financial Instruments and Exchange Law (Internal Control Reporting System)

The Auditing Office assesses the effectiveness of the Company's internal control over financial reporting to prepare and submits a report to the Financial Services Agency (FSA) every year. Through these activities, the Auditing Office is striving to ensure the reliability and transparency of Daicel's financial reporting.

Daicel's report on internal control over financial reporting for fiscal 2012 is disclosed on EDINET, a corporate disclosure system established by the FSA at the following

http://info.edinet-fsa.go.jp/ (Japanese language only)

Risk Management Initiatives

Daicel established the Risk Management Committee in 2006 as an organization to coordinate and promote Companywide risk management activities. Since its establishment, the Risk Management Committee has guided the entire Company in aggressively conducting risk management activities. In fiscal 2012, activities centered on enhancing sensitivity toward operating risks while promoting measures to counter the risks associated with earthquake disasters.

As a part of efforts to enhance sensitivity to operating risks, educational activities were implemented focusing on risk management through each of the Company's various training meetings. In this manner, steps were taken to increase awareness toward the operating risks of each department. Turning to measures aimed at countering the risks associated with earthquake disasters, the Risk Management Committee was able to confirm the progress of countermeasure implementation in accordance with plans. In fiscal 2013, plans are in place to go beyond the scope of earthquake disaster and promote measures that are designed to counter all natural disaster risks.

Daicel places the utmost emphasis on identifying those risks that are likely to have a major impact on its ability to achieve established targets. With respect to the Company's annual risk inventory clearance initiatives, Daicel takes into consideration measures that are designed to prevent the incidence of risk or to reduce any subsequent impact. Details of risks for which an inventory process has been completed are entered into an intranet database and priority levels assigned to each risk and countermeasures implemented accordingly. Steps are also taken to regularly input the status and progress of countermeasure implementation, with any new risks that have been identified promptly entered into the database. Utilizing this database, Daicel pursues a Plan-Do-Check-Act (PDCA) cycle in conjunction with the risk management activities of each department. More than 40 Group companies in Japan and overseas promote similar activities.*

The Risk Management Committee periodically confirms the status of countermeasure implementation by each department and Group company. In addition, summary activity reports are submitted by each department at the end of each fiscal year. This process enables all appropriate parties to fully grasp the status of risk and allows the Risk Management Committee to issue advice as considered appropriate. *Certain companies are excluded from using the database.

Communication with Shareholders and Investors

IR Activities

Extending beyond the timely disclosure of information, Daicel adopts an aggressive approach toward its IR activities. The Company holds briefing sessions for institutional investors and analysts to present its interim and full fiscal year results. This initiative is complemented by a series of individual interviews as well and visits undertaken by the Company. Through these and other means, Daicel strives actively to promote communication and to ensure that all appropriate parties gain a deeper understanding of the Company and its activities. Moreover, Daicel maintains a designated IR page on its website where it posts various pertinent documents including its Securities Report, Financial Results Report, Briefing Session and presentation materials, Annual Report and Shareholders' Report in a timely manner. At the same time, the Company is upgrading and expanding its information disclosure aimed at individual investors.

http://www.daicel.com/en/ir/irlibrary.html

Plant Tours for Analysts

On February 26, 2013, 25 institutional investors and analysts were invited to tour the Fuji Plant of Polyplastics Co., Ltd., a Group subsidiary. In addition to the plant, participants visited the adjoining Technical Solution Center. Here, practical examples and presentations of the Group's products were provided in the newly renovated showroom. Complementing these presentations, center staff gave detailed explanations while demonstrating a variety of the Group's analysis technologies. Together with a lively question and answer session, this tour was an opportunity to deepen participants' understanding of the business activities undertaken by Polyplastics Co., Ltd.



Annual Report

Daicel publishes an English language annual report mainly for the benefit of

overseas investors. A copy is also posted on the Company's homepage. The 2012 report was titled "Laying the Ground for the Future" and included an interview with the president, who looked back on fiscal 2011, the first year of Daicel's medium-term 3D-1* plan. In addition to introducing details of the Company's new businesses, each year great emphasis is placed on providing a report that helps readers gain a deeper understanding of the Group.



*Please refer to the Interview with the President section of this report on page 5.

Corporate Ethics (Compliance) Initiatives

The Daicel Group has positioned corporate ethics as an essential component of the systematic efforts of each department and Group company to engage in CSR activities.

Corporate Ethics Management System

Adherence by each employee to corporate ethics is an essential management issue, and the Daicel Group is accordingly promoting corporate ethics Groupwide.

The Corporate Ethics Management System is not a temporary measure. In order to ensure that corporate ethics is practiced continuously, we have formulated our Corporate Ethics Management Regulations at the Company. In addition, each department has established its own Corporate Ethics Management System based on processes that incorporate the Plan-Do-Check-Action (PDCA) cycle, and through activities involving the participation of all employees, we are striving to maintain and improve this system.

Promotion System

Daicel established the Corporate Compliance Program Division to promote corporate ethics activities and appointed the Company's representative director as its Corporate Compliance Officer.

Each Daicel department and Group company appoints a CSR Promotion Chief to lead various corporate ethics- and compliance-related activities.

The Corporate Compliance Program Division provides support to the Company and each Group company. The Division confirms the status and progress of each corporate ethics activity plan and helps to resolve various issues specific to each department and workplace through a process of interactive dialogue and opinion exchange. Considerable energies are directed toward supporting efforts that raise awareness toward compliance at each workplace. In fiscal 2012, a handbook focusing on the practical application of the Daicel Code of Conduct was posted on the intranet supplementing educational materials aimed at promoting increased understanding the policy at each workplace.

With respect to specific compliance issues, individual committees are established in accordance with each set of relevant rules and regulations. These committees consider and help resolve issues.

Examples of Committees

| Regulation | Committee | Goals |
|--|--|---|
| Regulations on Export Controls | Export Controls Committee | To ensure that the Company and its Group compa- nies do not engage in illegal export activities or the provision of goods and technologies that are prohibited under security trade-related laws and regulations for the purpose of maintaining interna- tional peace and security |
| Regulations on Personal Information Protection | Personal Information Protection Committee | To acquire, manage and use personal information appropriately |
| Regulations on Information Disclosure | Information Disclosure Committee | To disclose corporate information appropriately |

Legal Compliance System

Daicel has established a Legal Compliance System. Under this system, corporate departments are designated as organizations in charge of ensuring compliance with laws and regulations relating to their respective operations. More specifically, designated corporate departments are tasked with obtaining information regarding related laws and regulations and providing that information to other departments that may be affected. There are 13 corporate departments, including the Legal Group, designated as organizations responsible for compliance. These departments use the intranet to provide employees with information on revisions to laws and regulations as well as guidelines while also providing education materials.

Utilizing a checklist, each department and Group company in Japan voluntarily conducts a compliance review once each year. In addition to reflecting on the status of compliance at each workplace, this initiative is designed to uncover any issues.

Education and Training Programs

Daicel systematically provides corporate ethics training at various levels, including new graduate recruits, position-specific corporate ethics training when an employee is promoted, directors and presidents of Group companies. In addition to reconfirming the Company's concept and definition of CSR, training at various levels provides examples of misconduct by Daicel Group as well as other companies. These examples form the basis for discussions and again highlight the importance of corporate ethics. The Corporate Compliance Program Division takes the lead in promoting corporate ethics training at Group companies in Japan.

Training was conducted at a total of four Group companies in fiscal 2012. Also, in line with its technician training programs aimed at familiarizing technicians and engineers with the basic techniques required for fulfilling a manufacturer's responsibility (please refer to page 28)-achieving the stable supply of safe productsthe Company offers educational programs in such areas a legal compliance.

Individual divisions are tasked with obtaining information regarding the laws and regulations directly related to their operations and educating their personnel. In addition, organizations responsible for compliance with laws and regulations continue to hold in-house seminars. The Personnel Group takes a central role in holding in-house seminars open to all employees seeking to attend. Moreover, in-house seminars are held on specific issues and topics at the request of individual departments.

Implementation Themes Extracted from In-house Seminars

| Act against the Delay of Payment of Subcontract Proceeds, etc., to Subcontractors | Intellectual Property Rights |
|--|---|
| Export Management | Antitrust Law |
| Regulations on the Control of Chemical Substances | Act on the Protection of Personal Information |
| Countermeasures against Antisocial Forces | |

Whistleblowing System

With the intent of establishing a system to protect whistleblowers who act in the public interest, Daicel is taking steps to ensure that the employees of each workplace are able to issue report and hold consultations without difficulty. However, for circumstances where corporate ethics-related issues cannot easily be resolved through ordinary reporting to supervisors, the Company has put in place the Corporate Ethics Help Line. This Help Line is not only an in-house system. Daicel has also established an external counterpart through which employees can consult with external parties. In this manner, the Company is endeavoring to create a system that is easy-to-use by all employees.

Through the administration of the Corporate Ethics Help Line, whistleblowers and those who request consultations must be protected from the consequences of their actions. Daicel's Corporate Ethics Management Guidelines clearly state that: 1. The personal information and privacy of whistleblowers and those who request consultations must be protected:

- 2. Adverse treatment in response to whistleblowers and those who request consultations must be prohibited; and
- 3. Results related to investigations must be fed back to whistleblowers and those who requested consultations.

Similar in-house and external help lines are being established in Group companies in Japan to protect whistleblowers and those who request consultations. Drawing on the experience gained in Japan, steps are being taken to promote the introduction of whistleblowing systems that incorporate the basic systems for protecting whistleblowers and those who request consultations at Group companies overseas

The Responsible Care Initiative

The Responsible Care Initiative refers to activities in which organizations that manufacture or handle chemicals implement environmental, safety and health measures in a voluntary manner. These organizations are required to publicize the results of these activities and to facilitate communication with communities in which they operate. In addition, these activities must be conducted at all stages, from chemical development to disposal. The Responsible Care Initiative is promoted by the International Council of Chemical Associations (ICCA). This internationally recognized initiative is recommended by the "Agenda 21" document of the United Nations Conference on Environment and Development (UNCED), also known as the Responsible Care Earth Summit, held in Rio de Janeiro in 1992. The focus of this initiative is to encourage the proper management of chemicals. In Japan, in collaboration with the ICCA, the Japan Responsible Care Council (JRCC) was established in 1995 as a wing of the Japan Chemical Industry Association (JCIA). The JRCC was subsequently reorganized as a Responsible Care Committee under the JCIA. Since then, many corporations have joined this committee to promote the initiative.

Scope of Data Calculation for Responsible Care Initiative Reporting

http://www.daicel.com/csr/library.html

Data calculation in this section includes business sites and Group companies that conduct production and logistics operations. Detailed data, including the breakdown of the pollutant release and transfer register (PRTR) and the environmental impact of each business site, is available on Daicel's website at:





Arai Plant **Daicel Corporation** Daicel FineChem Ltd. Daicel Logistics Service Co., Ltd. Daicel Arai Chemical Ltd DM Novafoam, Ltd. Aomori business site • Okayama Plan Nagano Plan Daicel Pack Systems Ltd Isezaki Plant Dainichi Chemical Corp. Iwaki Plant Janan Shotshell I td Takasaki Plant Gunma Giant Shooting Practice Range Polyplastics Co., Ltd. Fuii Plant R&D Center Technical Solution Center Daicel Logistics Service Co., Ltd. Kanto Logistics Center Chubu Logistics Center Kansai Logistics Center Shaanxi Province, China Kentucky, U.S.A. (i'an Huida Daicel Safety System Co., Ltd America, LLC aicel Safety Tech America, Inc Daicel Safety Tube bt I o Processing, Inc anghai, China nsvlvania. U.S.A. anghai Daicel Polymers, Ltd Daicel Chiral Technolog (China) Co., Ltd. hejiang Province, China lingho Da-An Chemica Industries Co., Ltd.

Guangxi, China cel Nanning Food Ingredients Co., Ltd

n Polyplastics Co., Ltd. and overseas Group companies the period from January 1, 2012 to December 31, 2012. Daicel Safety Systems Korea has been included in calculations from 2013.

The Responsible Care Initiative

Responsible Care: Basic Policies and Implementation System

We will strive to implement the Responsible Care Initiative throughout our operations in order to contribute to a viable sustainable society. In 1995, Daicel established its Basic Policies for Responsible Care (RC) based on the guiding principles for improvement of environmental, health and safety conditions of the Japan Chemical Industry Association. Daicel is deeply aware of its responsibility as a corporate citizen to protect the environment and ensure the health and safety of all those involved with the Company in whatever capacity and every stage of its operations-from the design of products to their manufacture and disposal. With this in mind, Daicel is promoting across-the-board RC activities.

→ Basic Policies for Responsible Care

In all aspects of its business operations, Daicel is making the utmost efforts to ensure environmental preservation, process safety and disaster prevention, occupational health and safety, chemical and product safety, distribution safety and dialogue with society in accordance with the Responsible Care Standards of the Japan Chemical Industry Association (JCIA). Daicel is making steady and continuous progress in all of these areas.

- While strictly abiding by laws and regulations currently in effect, in its business operations, Daicel will strive to uphold the principles of environmental preservation and attention to safety. All employees will be made aware of policy measures and their assistance will be secured during implementation to ensure sustained effort.
- Daicel will conduct a thorough assessment of its new products' impact on health, safety, and the environment at every stage-development, manufacture, distribution, use, and disposal-prior to installing facilities for their production and introducing them to the market. Daicel will also strive to produce and offer products that take people's health, safety, and the environment into consideration
- Daicel will collect and maintain a database of information regarding 3 environmental and safety issues that relate to its products and the substances it handles. To ensure their safe handling and use, the Company will provide all necessary information to users and distributors.
- Daicel will promote raw material-saving and energy-saving initiatives as well as the recycling of waste products and restraints on their production to protect the environment and economize on the use of limited raw materials.
- Daicel will seek to constantly raise safety standards to achieve a no-accident, no-disaster record at the manufacturing stage. The Company will ensure that appropriate emergency response procedures are in place, training is undertaken, and, in the event of an accident, appropriate countermeasures are taken at once

- Daicel will research, develop, and introduce technologies and products that 6 are healthier, safer, and more environment-friendly than ever.
- Daicel pledges to strictly abide by regulations in force in the relevant jurisdictions and give due attention to the environmental and safety concerns of the other parties involved when engaging in international transactions involving chemical products, conducting international business, and transferring technologies abroad.
- Daicel will actively lead and support the environment- and safety-related activities of the Daicel Group companies with the aim of securing a better and safer environment for all.
- O Daicel will participate in and cooperate with environmental preservation activities undertaken by the communities in which it operates and seek to gain the trust and understanding of society as a whole by establishing a dialogue with it on safety and environmental matters.
- Daicel will deepen its understanding and awareness of the importance of biodiversity conservation and promote biodiversity-friendly activities so that generations to come will be able to receive the benefits of biodiversity.



Business Activities and Their Environmental Impact



PRTR substances (amount transferred)

For details regarding the energy consumption of overseas Group companies, please refer to page 42. Information regarding water consumption, greenhouse gas emissions, the total amount of wastewater, the amount recycled, and the amount of disposal by landfill can be found in the CSR 2013 Report URL: http://www.daicel.com/en/csr/library.html

TOPICS

12th Daicel Group Responsible Care Promotion Assembly (April 2, 2013)

We have held the Daicel Group Responsible Care Promotion Assembly every year since fiscal 2000. The goals of the Assembly are to ensure that the fiscal year policies and targets for Responsible Care activities are widely understood throughout the Group, and to raise the level of involvement by each Group company. The Assembly is attended by top management from each Group company, employees in charge of implementing Responsible Care activities (such as plant managers and internal company presidents) and other participants.

In fiscal 2013, the Assembly was held at our Osaka Head Office with a total of 90 or so participants including employees in charge of safety conditions at each workplace.

At the Assembly, an awards ceremony was held to honor individuals and groups that had made noteworthy contributions to Responsible Care activities. Junichi Takahama and Hirohide Kuroda from Aboshi Cellulose Production at the Cellulose Company received awards in recognition of their contributions to improving safety and security.

Reflecting on the serious accident at a chemical plant in Japan last year, Professor Kenichi Takano from Keio University was invited to give a speech about how to foster a culture of safety and create organizations that make accidents difficult to occur.

99 tons 58 tons



Professor Kenichi Takano from Kein University

Responsible Care awards ceremor

The Daicel Group's Responsible Care Targets and Results

| Area | | Fiscal 2012 | | | | | |
|--|---|--|---|--|--|--|--|
| | Arca | Targets | Results | | | | |
| RMS (Responsible Care Management System) | Total EHS Assessment System | Manage risks and strictly adhere to laws and regulations on the basis of Total EHS Assessment System. | We implemented Total EHS Assessments to address risks and ensure compliance with laws and regulations. New rules were created and implemented for safely handling nanomaterials. | | | | |
| Environmental Preservation | Global warming and energy conservation | Reduce energy intensity by 1% or more from the previous fiscal year by working to conserve energy and achieve targets in the Keidanren Voluntary Action Plan on the Environment. | A three-pronged approach was taken to conserve energy, coordinated by the Energy Conservation Committee, and energy consumption was cut by 8% (see page 43). (Cogeneration facilities started operating on schedule in September.) | | | | |
| | | Reduce electricity usage at home. | We asked employees to try and reduce electricity use at home during the summer and winter, and gave them information on energy-saving items and a diagnosis checklist. | | | | |
| | Waste reduction and recycling | Reduce landfill disposal of waste in order to achieve targets in the Keidanren Voluntary Action Plan on the Environment. | We reduced the amount of landfill waste disposal by 2 percentage points by reducing the volume of inorganic sludge, which is difficult to treat. | | | | |
| Process Safety and Disaster Prevention | Preventing large-scale damage | Conduct risk assessments for earthquakes and tsunamis, and improve anti-earthquake measures. | We performed anti-earthquake analyses, reviewed long-term equipment placement plans, and drew up plans to improve anti-earthquake measures. We did a risk analysis of potential damage from a tsunami and earthquake along the Nankai Trough. | | | | |
| | | Implement measures including an emergency earthquake alert system and install satellite phones. | We began operating an emergency earthquake alert system, an employee's safety confirmation/emergency call system and satellite phones according to schedule. | | | | |
| | | Stockpile reserves based on guidelines for evacuation and emergency reserves during an earthquake and tsunami. | Plans and budgets were drawn up for stockpiling reserves of food and daily necessities, and evacuation routes were planned based on the guidelines for evacuation and emergency reserves during an earthquake and tsunami. | | | | |
| | Aim for zero explosion and fire accidents | Zero accidents related to fires, explosions and leaks. | There were zero fire or explosion accidents this year, continuing from last year. Learning from an explosion at a major chemical company, we did a safety assessment into abnormal heat generation during reactions and tightened safety measures. We also set up a rapid notification system for accidents and updated accident response manuals. | | | | |
| Occupational Health and Safety | Aim for zero occupational injuries | Promote 3S, hazard prediction and crisis-identification activities. Provide education on safety, analyze close calls that would have led to minor or serious injuries and refer to occupational injury case studies to reduce the risk actions causing accidents. | We promoted 3S, hazard prediction and crisis-identification activities. We also passed on safety tips and techniques to other workplaces and worked to identify and eliminate risks from a new employee's viewpoint. The number of occupational injuries declined from the previous fiscal year. We reviewed workplace accidents in the past and made sure that countermeasures remained effectively in place. | | | | |
| Distribution Safety | Aim for zero logistics accidents | Halve the number of logistics-related issues and eliminate at-fault logistics accidents. (Hold a logistics-related issue prevention conference) | One at-fault logistics accident (a tanker truck accident). The number of distribution quality defects declined, but there was an overall increase in logistics-related issues. Countermeasures were implemented, at partner companies as well. | | | | |
| | | Promote energy-saving measures such as increasing transport units and decreasing drayage transport while preventing deterioration in energy consumption rates possibly caused by increased transport volume. | Energy consumption rates improved by about 8% from the previous fiscal year. | | | | |
| Chemical and Product Safety | Comply with European regulations on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) | Prepare for the REACH registration of products with an annual tonnage of between 100 tons and 1,000 tons before the deadline in May 2013. | We prepared for the registration of products with an annual tonnage of between 100 tons and 1,000 tons subject to REACH regulations before the deadline in May 2013. | | | | |
| | Reduce emissions of volatile organic compounds (VOCs) | Examine specific reduction measures to achieve a 40% reduction of VOC emissions from the fiscal 2000 level. | VOC emissions were essentially unchanged from the previous fiscal year. Established new operating procedures to reduce emissions at facilities that emit large quantities of VOCs, and plan to implement these in the next fiscal year. | | | | |
| | Reduce emissions of pollutant release and transfer register (PRTR) substances | Promote reduction measures with the aim of achieving the 40% reduction target from the fiscal 2001 level established under the medium-term plan. | Reduced emissions of PRTR substances into bodies of water by effectively utilizing activated sludge treatment, and achieved the medium-term target with a 51% reduction from the fiscal 2001 level. | | | | |
| Dialog with Society | Publish reports and promote communication with local communities | Continue to disclose safety and environmental performance indicators (for energy usage, etc.) for other Group companies and overseas Group companies. | Disclosed environmental performance data and indicator details for other Group companies and overseas Group companies in Daicel's CSR Report 2012 as well as on the Company's website. | | | | |

Other Group Company Responsible Care Targets and Results

| | Fiscal 2012 | | | | |
|---|---|---|--|--|--|
| Area | Targets | Results | | | |
| Environmental Preservation | Reduce energy intensity by 1% or more from the previous fiscal year's level (business subject to the Energy Saving Law). | Energy intensity was reduced by about 1% year on year. | | | |
| | Promote household energy-saving activities. | Distributed information on energy-saving items and diagnosis checklists in response to tight electric power supply and demand. | | | |
| | Continue to avoid increase in landfill waste disposal volume. Continue 3R activities for industrial waste. | Successfully prevented any further increase in final disposal by landfill. Implemented 3R activities and identified themes. | | | |
| Occupational Health and Safety | Promote 3S, hazard prediction and crisis-identification activities on a Groupwide basis. Create a venue for talking about workplace safety and foster a culture of safety. | Promoted 35, hazard prediction and crisis-identification activities. Worked on improving communications, such as through informal gatherings to discuss safety, but the number of occupational accidents increased by one over the previous fiscal year. | | | |
| Process Safety and Disaster Prevention | Continue the effective administration of emergency response guidelines. In addition to Class I plans, conduct Total EHS Assessments on small-scale retrofitting plans. | Each company conducted disaster drills consistent with emergency response guidelines and updated organizational charts. Confirmed that Total EHS Assessments were being performed on small-scale retrofitting plans. | | | |

* Achievement rate: \bigcirc : 100 to 70%; \bigtriangleup : 70 to 40%; \times : 40 to 0%

What is...? Drayage transport: Refers to the surface transport of containers by truck from ships and railways to their destinations (surface transport tends to consume more energy than marine transport).

3R: This term refers to activities to reduce waste generation, reuse reusable resources and recycle resources. REACH: The Registration, Evaluation, Authorisation and Restriction of Chemicals is a European Union regulation that requires producers of chemical substances to register the chemical substances and provide data on their safety assessment, usage restrictions and usage authorizations.

| Achievement rate* Fiscal 2013 Targets | | Medium-Term Targets (Fiscal 2011 to Fiscal 2013) | | |
|---------------------------------------|--|---|--|--|
| 0 | Manage risks and strictly adhere to laws and regulations on the basis of the Total EHS Assessment System. | Manage risks and strictly adhere to laws and regulations on the basis of the Total EHS Assessment System. | | |
| 0 | Reduce energy intensity by 1% or more from the previous fiscal year. Promote energy conservation to achieve targets set forth in Commitment to a Low Carbon Society. | Each year, reduce energy intensity by 1% or more from the previous year. | | |
| 0 | Reduce electricity usage at home. | Promote reduction of electricity usage at home. | | |
| 0 | Prevent increase of landfill disposal of waste in order to achieve targets in the Keidanren Voluntary Action Plan on the Environment. | Prevent increase of landfill disposal of waste. | | |
| 0 | Conduct risk assessments for earthquakes, tsunamis and liquefaction, and methodically improve anti-earthquake measures. Complete measures on schedule to install an emergency earthquake alert system, an employee's safety confirmation/emergency call system and satellite phones. Stockpile reserves of food, daily necessities and disaster equipment and materials as planned. Conduct Companywide disaster response drills in combination with on-site disaster drills. | Taking lessons learned from the Great East Japan Earthquake, strengthen preparedness for a major disaster. Reinforce disaster response systems in cooperation with national and local governments to prepare for a major earthquake along the Nankai Trough. | | |
| 0 | Zero accidents related to fires, explosions and leaks. (Finish countermeasures recommended by the Fire Department) | Zero accidents related to fires, explosions and leaks. | | |
| 0 | Aim for zero occupational injuries Strengthen 35, hazard prediction and crisis-identification activities, including at partner companies. Take measures to prevent similar accidents from occurring and prevent human errors. | Aim for zero occupational injuries Promote further improvements in 3S, hazard prediction and crisis-identification activities. Take measures to prevent similar accidents from occurring and prevent human errors. Standardize and strictly follow occupational health and safety rules. | | |
| × | Aim for zero at-fault logistics accidents. Aim to halve logistics-related issues. | Aim for zero at-fault logistics accidents. Aim to halve logistics-related issues. | | |
| 0 | Continue to survey and examine new energy conservation items in logistics. | Achieve 1% or higher annual improvement in energy conservation in logistics. | | |
| 0 | Finish registering relevant products (between 100 tons and 1,000 tons per year) by the May 2013 deadline. | Precisely address chemical substance management regulations such as REACH and others inside and outside Japan. | | |
| Δ | Strengthen measures to reduce VOC emissions in order to achieve the medium-term target for a 40% reduction of VOC emissions from the fiscal 2000 level. | Reduce VOC emissions by 40% from the fiscal 2000 level. | | |
| 0 | Continue to achieve the medium-term target for a 40% reduction of PRTR substances from the fiscal 2001 level. | Reduce PRTR substances by 40% from the fiscal 2001 level. | | |
| 0 | Disclose occupational safety and environmental performance data for other Group companies and overseas Group companies. | Disclose to society the status of Responsible Care activities at Group companies, including overseas Group companies. | | |

| Achievement rate* | Fiscal 2013 Targets | Medium-Term Targets (Fiscal 2011 to Fiscal 2013) |
|-------------------|---|--|
| 0 | Set target to reduce energy intensity by 1% or more from the previous fiscal year's level, including overseas Group companies. | Reduce energy intensity by at least 1% year on year. |
| 0 | Promote household energy-saving activities. | Promote household energy-saving activities. |
| 0 | Avoid increase in landfill waste disposal volume. Continue 3R activities for industrial waste. | Avoid increase in landfill waste disposal volume. Continue 3R activities for industrial waste. |
| Δ | Promote 3S, hazard prediction and crisis-identification activities. Share occupational safety data among other Group companies, horizontally deploy these activities, and prevent similar accidents from occurring. | Promote 3S, hazard prediction and crisis-identification activities. |
| 0 | Continue the administration of emergency response guidelines. Apply Total EHS Assessments to small-scale retrofitting plans and specification changes. | Continue the administration of emergency response guidelines. Strengthen disaster preparedness. Ensure use of Total EHS Assessment System. |

Environmental Preservation

The Energy Conservation Committee is the centerpiece of the Group's efforts to conserve energy. The Aboshi Plant now meets 100% of its own electricity supply requirements following the startup of a cutting-edge cogeneration facility.

Global Warming Prevention and Energy Conservation

Daicel is a participant in the Nippon Keidanren's Commitment to a Low Carbon Society, which was unveiled on January 17, 2013. In addition, the Company has created the Energy Conservation Committee to coordinate efforts to achieve CO_2 emission reduction targets for fiscal 2020.

In fiscal 2012, the Daicel Group made concerted efforts to conserve energy, such as by utilizing low-grade waste heat from the acid recovery systems of the cellulose acetate plants at the Aboshi and Ohtake plants, and by commencing operations of a highly efficient, cutting-edge

→ Daicel's Energy Consumption and Intensity Index



*The Japan Chemical Industry Association (JCIA) has set a target for average per-unit energy consumption index between fiscal 2008 and fiscal 2012 at 80 with the fiscal 1990 level set as 100.



⊖ Other/Overseas Group Companies' Energy Consumption

cogeneration facility at the Aboshi Plant in September. As a result, Daicel and the Group cut their energy usage by 8% and 5% (crude oil equivalent of 31,000 kiloliters), respectively compared with the previous fiscal year.

Daicel improved its energy intensity index by 12 points and its energy-based CO_2 emission intensity index by 6 points.

Daicel will continue efforts to reduce CO_2 emissions and promote energy conservation by optimally operating its cogeneration facility, improving the collection of waste heat through thermal pinch analysis and simulations, and recovering drain heat.

The following graphs illustrate the energy consumption and $\rm CO_2$ emissions of other Group companies and overseas Group companies.

We all remain committed to reducing energy consumption.

Daicel's CO₂ Emissions Attributable to Energy Consumption and CO₂ Emissions Intensity Index



Other/Overseas Group Company CO₂ Emissions Attributable to Energy Consumption



What is...? Energy intensity: Energy intensity is defined as the total consumption of electricity, thermal energy and fuels required for manufacturing a specified unit of product. Lower energy intensity indicates higher production efficiency—in other words, greater energy efficiency—which, in turn, presents greater potential for preventing global warming. Energy intensity index: Energy intensity index can be obtained by the following formula:

Energy intensity index can be obtained by the following formula: Energy intensity index for a year = Energy intensity for that year/ Energy intensity in a standard year × 100

Energy intensity index for a year – Energy intensity for that year – Energy intensity of that year Energy intensity in a statituaru year × 100

Thermal pinch analysis simulation: An energy conservation technique for understanding the thermal balance of an entire plant and optimizing the recovery and utilization of thermal energy.

Organizational Structure for Promotion of Energy Saving

In response to the revised Law Concerning the Rational Use of Energy (enacted in 2010), Daicel established an Energy Conservation Committee that same year to more effectively promote Companywide energy saving. For the Company to achieve the annual average reduction in its energy intensity of 1% or more targeted in its 3D-I medium-term plan, energy saving was promoted from three angles: Energy Department energy savings; energy savings in existing current production processes; and the introduction of innovative energy-saving technologies.



Energy Saving During Product Distribution

Daicel's Energy Consumption and

Daicel Logistics Service Co., Ltd., which is responsible for the Daicel Group's logistics, works to save energy in the distribution of products. In fiscal 2012, the company transported about the same amount as in the previous year but improved its energy consumption through such activities as modal shifts, container round use and maximizing the transportation unit. Its energy consumption rates was improved approximately 8% compared with the previous fiscal year.



What is...? Modal shift: The shift from truck-based goods transportation to more environmentally friendly marine and railway transportation. Cogeneration: A high-efficiency energy supply system that uses exhaust heat such as that from boilers to produce electric power and steam at the same time. FEU (Forty-foot equivalent unit): Conversion figure for a 40ft container. Container provide the provide the provide the provide the provide the provided the pro

Container Round Use: The practice of using devanned import containers for exports, without returning them to the shipping companies. By omitting the process of returning a devanned empty container and getting a new empty container for vanning, the practice both reduces CO₂ emissions and saves on transportation costs. Container Round Use Ratio: The ratio of containers that were used for imports and where efforts were made to re-use for exports against the number of export containers.

TOPICS

Aboshi Plant Cogeneration Facility in Operation

The Company started work to install a cogeneration facility at its Himeji Production Sector/Aboshi Plant in July 2011 and commenced its commercial operation according to plan in September 2012.

The facility generates a total in-house power output of approximately 80MW. Since this enables the coverage of almost all electrical power requirements by in-house power generation, a reduction in the amount of electric power purchased is expected. At the same time, the Company has been able to achieve a reduction in environmental impact by slashing CO₂ emissions.

Using a 30MW gas turbine that produces 45 tons of steam per hour as a motor, in performance tests the cogeneration facility achieved a cogeneration supply heat efficiency of approximately 86%. This is in the same class as the world's most efficient, state-of-the-art machine.



In addition, to bring about even greater efficiency to the modal shift to domestic container ships, large-scale warehouses (see photo below) were constructed on the coastlines of

the Aboshi and Ohtake plants.





The 2,500m² cellulose warehouse at the Aboshi Plant

Occupational Health and Safety



→ Labor Accidents at Other/Overseas Group Companies: Accompanied/Not Accompanied by Lost Workdays









The number of labor accidents with/without lost workdays for all workplaces decreased by one compared with fiscal 2011 to 14 incidents. The labor accident frequency rate per million hours was 1.50 in fiscal 2012 (JCIA average: 2.34).

At all of its workplaces, Daicel is promoting various activities to upgrade the foundation of production sites-the base of new value creation. These include 3S (Seiri (tidying), seiton (putting everything in order) and seisou (cleaning)) activities, crisis-identification activities, hazard prediction activities and operational training programs at the Operation Training Center. In order to foster a culture that emphasizes workplace safety, the Company commenced a series of new education programs for staff serving as instructors (assistant managers though to general managers) in fiscal 2011. Also, the Company is working in close cooperation with the labor union to implement various measures to prevent the occurrence of labor accidents and the recurrence of similar accidents at all of its workplaces, under the basic concept of "create a better future by learning from the lessons of the past." Steps are also taken confirm that new entrants are fully aware of the dangers each month an accident occurs.

Thanks to these measures, the number of labor accidents with/without lost workdays for all workplaces decreased by one compared with fiscal 2011 to 14 incidents. Daicel also reported a labor accident frequency rate of 1.50 in fiscal 2012, maintaining a level well below the Japan Chemical Industry Association (JCIA) average. For other Group companies, there were seven labor accidents with/without lost workdays. The number of accidents at overseas Group companies increased to 31.

In fiscal 2013, Daicel will continue to carry out 3S, crisis-identification, hazard prediction, and other basic activities. At the same time, the Company will look to augment its education, including simulation training to prevent specific dangers at its new Operation Training Center (please refer to page 25). Moreover, every effort will be made to reduce the number of accidents caused by an unsafe action by steadfastly predicting potential hazards. Turning to other and overseas Group companies, Daicel will endeavor to put in place the necessary mechanisms to secure workplace safety while ensuring that safety activities remain a matter of course.

TOPICS

Daicel Presented with Japan Petrochemical Industry Association Safety Awards for Fiscal 2012

Toshio Okamura from the Energy Department at the Ohtake Plant has been presented with the Japan Petrochemical Industry Association (JPCA) Safety Award for Fiscal 2012. The award is in recognition of Okamura's many years of contributing to workplace safety activities and to his superior skills.

The President's Safety Excellence Award

While raising safety awareness, Daicel Corporation evaluates the efforts and achievements with regard to the safety activities of its employees and others. In fiscal 2012, the Aboshi Plant (more than 600 employees) recorded its third consecutive year of no accidents accompanied by lost workdays.

The award included not only Daicel Corporation employees and Group company employees in the workplace, but also temporary staff.



Labor accident frequency rate, accident frequency rate: A safety index to show the labor accident occurrence rate calculated with the following formula Accident frequency rate = Number of people involved in labor accident/Number of total extra working hours (unit: millions of hours)

Process Safety and Disaster Prevention

Continued Achievement: Zero accidents involving fire or explosion

Carrying on from the previous fiscal year, Daicel again achieved zero fire and explosion accidents in fiscal 2012. This reflects the Company's efforts to promote a variety of initiatives including a total EHS assessment system, general operability studies and a full review of potential risks, all with the aim of promoting stable plant operations and reducing plant troubles and risks.

In accordance with annual plans, each place of business works in unison with the Company's head office to conduct regular emergency drills. These drills are designed to ensure that all employees are well versed in lifesaving as well as fire extinguishing procedures in the event of an emergency, are capable of minimizing any impact on neighboring areas and consistently engage in appropriate disaster-prevention activities.

In fiscal 2012, the Daicel Group reviewed its disaster structure and systems, and undertook a seismic analysis of all buildings and facilities with steps taken to reinforce the Group's property portfolio in line with medium-term plans. These initiatives were aimed at addressing largescale earthquake, tsunami, liquefaction and other disasters. Taking into consideration the incidence of successive explosions and fires at chemical plants, the Group looked at extraordinary measures at plants handling substances that give off abnormal levels of heat. In addition to reverifying measures after detection, considerable emphasis was also placed on bolstering educational and training activities for operators. The Group participated in activities organized by the newly established Security Enhancement Center of the Japan Society for Safety Engineering. The Center was established for the purpose of bolstering security in the processing industry.

In fiscal 2013, the Daicel Group will continue to implement measures to address the risk of tsunamis while also steadfastly pursuing a variety of measures in order to prevent disastrous explosions and fires.

Harima Plant

Daicel Safety Systems Inc.



Fiscal 2012 Responsible Care poster top prize winner By Ai Tsujimoto B Team, No. 2 Plant

Distribution Safety

We are continuing activities aimed at minimizing logistics-related troubles. Daicel Logistics Service Co., Ltd., which is responsible for the distribution function for the Daicel Group, has put in place a basic philosophy that emphasizes efforts to garner the trust and confidence of society by providing services that fulfill the needs of its customers anywhere and at any time. Guided by this philosophy, the company works diligently to enhance transportation quality and safety.

What is...? General operability studies: Daicel's proprietary method of standardizing operations. A method for comprehensively summarizing decision-making methods with respect to the determination and operation of all possible plant conditions and situations, drawing on plant operating sensor and alarm information



Takahiko Ando General Manager of Himeji Production Sector and Aboshi Plant Daicel Corporation

TOPICS

Participation in Third High-Level Safety Meeting

In view of the occurrence of recent plant accidents, a high-level safety meeting was held by the main association member companies at the JPCA on January 29, 2013.

Including Daicel Corporation, senior management from four companies, the Ministry of Economy, Trade and Industry, and the JPCA met at this third meeting, which was chaired by Masamitsu



Tamura, a professor emeritus at the University of Tokyo and a leading authority on safety engineering. A lively exchange of opinions took place on such topics as contributory factors in accidents, measures to prevent them from happening, and safety capability enhancements. In his message, President Fudaba expressed his New Year wishes and mentioned the anniversary of the Company's founding before going on to give his opinions on accident prevention initiatives and of the importance of responses should an accident occur. He also cited as examples such Daicel initiatives as Daicel Production Innovation, and the hands-on Operation Training Center. In conclusion, Professor Tamura gave his summing up of the day, with the proposal that "We agree today to further strengthen safety measures under the strong leadership of senior management." Following the agreement of all members, the meeting was closed.

It was a meeting at which you could sense the forthright thoughtswhen it comes to safety operations-of senior management from every company, President Fudaba included. An overview of the meeting, in the form of a JPCA news release, can be viewed here:

http://www.jpca.or.jp/pdf/20130130news.pdf

Tank Truck Unloading Skills Competition

Representatives from each sales office gathered at Daicel Logistics Service Co., Ltd.'s training center on September 15, 2012, to take part in a storage tank truck unloading skills competition. The competitors were pitted against each other in their daily endeavors, using the basic operations for which they have been trained.



First place Akihiro Hase (center) Runner up Takuya Ando (right) Third place Hirotsugu Ono (left)



General view of the Tank Truck Unloading Skills Competition

In fiscal 2012, there were no notable improvements in addressing logistics-related troubles. In fiscal 2013, Daicel will work with its transportation contract partner companies to establish a central system of safety and quality cooperation meetings. Every effort will be made to prevent the occurrence of any incident with an eye to completely eliminating logistics-related troubles.

Chemical and Product Safety



→ PRTR Substance Emissions



Quality Assurance

All of Daicel's plants have acquired ISO 9001 certification, a set of international standards for quality management systems. Each plant constantly works to offer products that satisfy customers and meet their needs.

Each internal company is responsible for the quality of their products. Relevant officials from internal company plants and corporate departments attend regular quality assurance meetings held at each internal company to share information, including customer requests. Moreover each internal company works closely with Daicel's headquarters and plants to leverage the Group's quality management system and thus ensure the maintenance and improvement of product quality across the Group.

Furthermore, in pursuit of safer and more user-friendly products, we are addressing the issue of acquiring certifications of quality management standards as well as meeting the legal requirements in each field for the following product lineups:

• Airbag inflators: Acquired ISO/TS 16949 certification (quality management system standards for the automobile industry)

- Special machinery products: Acquired JISQ 9100 certification (quality management system standards for the aerospace industry)
- Medical and pharmaceutical products: Implementing production and quality control under an organization and administration standard based on Good Manufacturing Practice (GMP) rules for the manufacturing, management and quality control of pharmaceutical products

Other and overseas Group companies are also working to obtain quality assurance management certification and to provide products that consistently meet with their customers' satisfaction.

Reducing Volatile Organic Compound (VOC) Emissions

As a result of the ongoing promotion in fiscal 2012 of improvements in processes that use such main VOC substances as acetone and toluene, Daicel achieved the Japan Chemical Industry Association (JCIA) VOC reduction target (30% reduction compared with fiscal 2000).

Furthermore, new conditions were established to cover the reduced operation of equipment that emits large quantities of VOCs. Daicel is promoting VOC reduction toward its mediumterm VOC emission target (40% reduction in fiscal 2013 compared with fiscal 2000).

Management of PRTR Substance Emissions and Transfers, Reduction of Their Emissions

Daicel works to manage the transfer as well as to both manage and reduce the emission of the chemical substances specified under the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Law concerning Pollutant Release and Transfer Register [PRTR]) as well as of substances specified independently by the JCIA.

In fiscal 2012, smooth progress was made with reduction measures, such as the establishment of conditions for the operation of innovative activated sludge treatment in the wastewater system, and the Company achieved a year-on-year emissions reduction of 35 tons (51% compared with fiscal 2001), thereby beating its in-house reduction target of 40% by fiscal 2013 for substances that fall within the scope of VOC and PRTR requirements. Daicel will work to further reduce emissions in the years to come.

| Status of Product Qualit | v Management | System Cartification |
|--------------------------|---------------|----------------------|
| | y management. | System Certification |

| Name of Business Site/Group Company | Certificate No. | Certificate/ Edition | Acquisition Date |
|--|------------------------------|----------------------------------|------------------------|
| Daicel Aboshi Plant, Himeji Production Sector | JQA-0953 | 1509001:2008 | Aug. 1995 |
| Daicel Ohtake Plant | JQA-1023 | ISO9001:2008 | Oct. 1995 |
| Daicel Arai Plant | JCQA-0136 | ISO9001:2008 | June 1996 |
| Daicel Aerospace & Defense Systems Division, | BSK0027 | JISQ9100:2009 | July 1998 |
| Aerospace & Defense System/Safety Systems Company | BSKA0028 | JISQ9001:2008 | Apr. 1999 |
| Daicel MSD Division, Aerospace & Defense Systems/Safety Systems Company | JQA-2448 | ISO9001:2008 | June 2003 |
| Daicel Safety Systems Inc. | JQA-AU0033 | ISO/TS16949:2009 | Apr. 2004 |
| Hirohata Plant, Daicel Polymer Ltd. | JQA-QM4647 | ISO9001:2008 | Apr. 2000 |
| Polyplastics Co., Ltd. R&D Center/Fuji Plant | JQA-1283 JQA-AU0071 | ISO9001:2008 ISO/TS16949:2009 | May 1996 Nov. 2004 |
| Kanzaki Plant, Daicel Value Coating Ltd. | JCQA-0530 | ISO9001:2008 | Aug. 1999 |
| Aboshi Plant, Daicel-Evonik Ltd. | JQA-2481 | ISO9001:2008 | July 1998 |
| Daicel Pack Systems Ltd. | JQA-QMA-11465 | ISO9001:2008 | July 2004 |
| Nagano Plant, DM Novafoam, Ltd. | ASR-Q1169 (E-0309) | ISO9001:2008 | Feb. 2003 |
| Okayama Plant, DM Novafoam, Ltd. | ASR-Q1170 (E-0310) | ISO9001:2008 | June 2004 |
| Aboshi Plant, Daicen Membrane-Systems Ltd. | JQA-1577 | ISO9001:2008 | Feb. 1997 |
| Dainichi Chemical Corp. | JCQA-0689 | ISO9001:2008 | Apr. 2000 |
| Daicel Logistics Service Co., Ltd. | JCQA-0568 | ISO9001:2008 | Oct. 1999 |
| Japan Shotshell Ltd. | JQA-QMA13973 | ISO9001:2008 | Aug. 2009 |
| Daicel Safety Systems America, LLC | TS86144 | ISO/TS16949:2009 | Dec. 2005 |
| Daicel Safety Technologies America, Inc. | FM 502734 | ISO9001:2008 | Dec. 2005 |
| Daicel Safety Systems Europe Sp. z o. o. | 44 111 070 260 | ISO/TS16949:2009 | Mar. 2007 |
| Daicel Safety Systems (Thailand) Co., Ltd. | BGK0403748/A BGK0403748/B | ISO9001:2008 ISO/TS16949:2009 | Apr. 2005 |
| Daicel Safety Technologies (Thailand) Co., Ltd. | BGK6005402 | ISO9001:2008 | Apr. 2005 |
| Daicel Safety Systems (Jiangsu) Co., Ltd. | SGS TS-9 0709 M2 | ISO/TS16949:2009 | Mar. 2009 |
| Daicel Nanning Food Ingredients Co., Ltd. | CN10/31437 CH10/2036 | ISO9001:2008 ISO22000:2005 | Oct. 2003 Mar. 2007 |
| Ningbo Da-An Chemical Industries Co., Ltd. | 093702 | ISO9001:2008 | Dec. 2009 |
| Xi'an Huida Chemical Industries Co., Ltd. | 00111Q26766R3M/6100 | ISO9001:2008 | June 1999 |
| Shanghai Daicel Polymers, Ltd. | 30710458/2 | ISO9001:2008 | Oct. 1999 |
| Daicel Chiral Technologies (India) Private Ltd. | 112093-2012-AQ-IND-RvA | ISO9001:2008 | Jan. 2012 |

What is...? Pollutant Release and Transfer Register (PRTR): A system to calculate the extent to which the production, use and storage of specific chemical substances results in the release and transfer of those substances 17 into the environment.

Third-Party Opinion



第三者検証 意見書

株式会社ダイセル 代表取締役社長 札場 操 殿

報告書検証の目的

レスポンシブル・ケア報告書検証は、株式会社ダイセルが作成したダイセルグループCSR報告書 2013(以後、報告書 と略す)に記載されている、下記の事項について、化学業界の専門家であるレスポンシブル・ケア検証センターが意見を表明 することを目的としています。

- 1) パフォーマンス指標(数値)の算出・集計方法の合理性及び数値の正確性
- 2) 数値以外の記載情報の正確性
- 3) レスポンシブル・ケア活動及び CSR 活動

4) 報告書の特徴

■検証の手順

- ついて調査を行いました。調査は、報告書の内容について各業務責任者及び報告書作成責任者に質問すること、並びに 資料提示・説明を受けることにより行いました。
- ・播磨工場において、本社に報告する数値の算出方法の合理性、数値の正確性、及び数値以外の記載情報の正確性の調査 を行いました。調査は、各業務責任者及び報告書作成責任者に質問すること、資料提示・説明を受けること、並びに証拠物 件と照合することにより行いました。

・数値及び記載情報の調査についてはサンプリング手法を適用しました。

■ 食見

- 1) パフォーマンス指標(数値)の算出・集計方法の合理性及び数値の正確性について ・数値の算出・集計方法は、本社及び播磨工場において、合理的な方法を採用しています。 ・調査した範囲に於いて、パフォーマンスの数値は正確に算出・集計されています。 2) 数値以外の記載情報の正確性について
- ・報告書に記載された情報は、正確であることを確認しました。原案段階では表現の適切性あるいは文章の分かり易さに 関し指摘しましたが、現報告書では修正されており、現在修正すべき重要な事項は認められません。
- 3) レスポンシブル・ケア活動及び CSR 活動について
- ・レスポンシブル・ケア(RC)及び CSR 活動を確実に実施しており、企業倫理研修では PDCA を確実に回しており、プラント 安全では、自社開発した総合 OBS(総合オペラビリティスタディ:運転標準化手法)を活用し、ブラント運転の安定化・トラ ブル低減に効果を上げていることを評価します。
- 事故・トラブルなどのマイナスの情報を適切に記載しており、評価します。 評価します。
- ・播磨工場では、タンク・配管内の内容物、配管の流れ方向などの表示を全工場統一の様式で整備を進めており、評価し ます。

4)報告書の特徴

・目次で、特集については、写真を挿入し、読者に理解を得るように工夫をしています。 ・トップインタビューでは、社長のお考えが伝わりやすく、理解しやすくなっています。 ・RC 推進体制の図及び中央ヘルスケア委員会の図は、さらにわかりやすいものにする工夫が必要です。

ダイセルグループCSR報告書 2013

2013年6月3日

一般社团法人 日本化学工業協会 レスポンシブル・ケア検証センター長 高瀬辣治



・本社において、各サイト(事業所、工場)から報告される数値の集計方法の合理性、及び数値以外の記載情報の正確性に

・「モノづくり」は人づくりとする新人研修を、各新人に教育担当のシニアをはりつけて実施していることを評価します。

以上